The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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Original Correspondence.

THE MINES REGULATION AND INSPECTION ACT.

USING THE UPCAST SHAFT FOR RAISING AND LOWERING MEN.

SIR,—Some of the local papers having given publicity to an account of a meeting of coal miners, held at Farnworth on June 28, which might lead to mistakes with regard to the provisions of the Mines Regulation and Inspection Act, will you allow me, through the medium of the *Mining Journal*, to say that should there be at any time in the Manchester district of Lancashire any upcast shaft, which is used for persons descending or ascending, so hot or noxious as to be unfit for such purpose, or should there be danger of any kind which the manager is neglecting, but which admits of being removed, I will upon its being communicated to me by the miners cause such measures as the Act empowers to be taken in order that the neglect may be remedied.

Pendleton, Manchester, July 5. JOSEPH DICKINSON,
Inspector of Mines.

ON THE EMPLOYMENT OF WOMEN AT COLLIERIES.

SIR,—In the Journal of June 30 I find in your report of the "Select Committee on Mines" that evidence on this subject was given before the Committee by Mr. G. Gilroy, of the Ince Hall Company, and others, but more especially by Mr. Gilroy. On reading the report, I was so pleased with the open, fearless, and true style in which he gave his evidence, especially his experience of their work and character, that I thought I should not be doing my duty did I not confirm it as far as I could. On this very subject, some two years ago, you published a letter of mine in the *Mining Journal*, in which I gave my experience, fully bearing out the statement now referred to. I can find collieries that will rank fully as high as Ince Hall; and throughout my professional experience I have ever found the colliery women rank far above either farm or factory workers. As house wives they are much superior: the colliery women know that food and rest are needful for their labour, and look far less to drink, dress, or enjoyment than either of the others. Prostitution is all but unknown amongst them, and bastardy by far less common than amongst either of the others: in fact, it is very uncommon. I can speak of a very large experience among them. Their food is better, and they strive to have plenty rather than fine clothes; they will not buy poor meat, nor do they like the make-shift dinners that are so often found in the factory woman's house—tea and bread and butter. No; they know hard work needs good food, and, as a class, they strive to get it regularly. Again, as a nurse, I look upon a colliery woman to be A 1 as contrasted to either of the other class. They are more sober and thoughtful, and I would rather have one for my nurse, did I need it, at four times the pay of a factory or farm woman. I have, as a rule, found them women of courage and confidence.

I have ever thought their presence in the pit has had a good influence over the men and boys, for they are in chief related in some degree to the men and boys; and the young ones have, as a rule, to look for their husbands amongst the young men, so that under every circumstance I think their presence an advantage which is mutual. Let us not from want of knowledge close a door which leads to honest industry to a class which have far too few means of proving they are the better half. Let woman's labour be made honourable whenever possible, and then she will not be so dependent on man, and will from very shame reform many an idle vagabond in the shape of a lazy man. Proud may Mr. Gilroy be of his photographic gallery! Bravo Gilroy! I say: could you have formed a Moral Photographic Gallery you might have done so with the same confidence. The London milliner, the London tailoress, and many other women workers in our large cities, do not, as a class, in my opinion, come up to your band of coal workers. They labour hard for their money it is true, but it is a healthy labour—one open to the winds of heaven, one required by man, and one that is in no sense degrading to woman. If Mr. W. O. Foster will only go to Ince he will see what they are, both at work and at home: the contrast will be great as against Staffordshire. I know both districts well, and I can fully confirm every word Mr. Gilroy says. —— A FACTORY SURGEON.

"EXAMPLES OF MODERN MINING MACHINERY."

SIR,—In the *Engineer* of June 22, under the above heading, I read a description of an Ore Separating Machine, which is stated to the constructed by Messrs. Harvey and Co., of Hayle. As this by many may be considered a new or modern machine, I take the opportunity of informing you that this machine, in every particular, was *patented* thirty-five years ago by Mr. Thos. Petherick, then of Fowey Consols Mines, and where it has been working ever since, as well as similar machines at a great many mines in the district, and also in the neighbourhood of Liskeard. I am also in a position to state that the said Ore Separating Machines have been made, and sent to almost every part of the globe, by Messrs. West and Sons, of the St. Blazey and St. Austell Foundries and Engine Works, for many years past. From my experience of these machines, I cannot too strongly recommend them for the purpose for which they were originally designed—the separation of ores. If you will kindly insert this letter in your valuable Journal I shall feel much obliged.

Par Station, Cornwall, June 29. FRANCIS PUCKEY,
Of Fowey and Par Consols.

PETROLEUM AS STEAM FUEL.

SIR,—The report of the engineer to the Admiralty consists of a full table of results, accompanied by drawings, and a few remarks. Such reports, when satisfactory, are not, I understand, to be sent out; so I am not to have a copy. The experiments will be continued on a larger scale. I have offered to take one of the large boilers and fit it for burning shale oil, without making any alteration beyond taking out the grate-bars and putting in a small chimney. Such boiler has only to have the grate-bars replaced to again burn coal. All the difficulties of burning the oil were at last mastered, and an evaporation, constant and continuous, of 18 lbs. of water to 1 lb. of oil obtained. It was evident that this figure might have been exceeded. The boiler is open at the back, and at one of the fire-places there was considerable leakage, through the grate not fitting closely. Whenever the oil is burnt without being subjected to the steam jet there is always a little smoke. The use of water as an auxiliary fuel to the oil is to some of the engineers almost incomprehensible; but the oil cannot be used as steam fuel without it. There is no other way of getting rid, or rather wholly preventing, the enormous quantity of smoke and soot the oil makes when burnt in a confined space. Decomposing a small quantity of water vapour, and burning the gases, does it completely, and increases the power of the boiler from 60 to 80 per cent. It was an extremely difficult thing at first to do properly, and it has taken three months experimenting to find out an easy method; now the oil and the steam go in side by side, without the least difficulty. They have to be exactly regulated to each other; the more smoky oil requires the most steam. The steam can put the fire out, or burn the petroleum very quickly, according to the quantity used. A ship can and will soon be able to go round the world, and burn either the natural or the artificial oil, or the common residuum, at pleasure. If 1 ton of the oil does as much as 2½ or 3 tons of the best coal, the freight space gained pays for the extra expense of the oil, and leaves a large profit besides. Coal is not so cheap in any part of the world as it is here. Besides the profit gained there is much less labour in using the oil. It can be stowed securely in the lowest part of the vessel—a syphon-pipe runs it into the boiler in a constant stream. The fire-doors need never be opened; the fires can be put out and re-lighted without opening them. There is no ash or cinder of any kind. The petroleum coke forms a skin on the surface of the grate, and protects it; it is indestructible itself, and forms a better porous grate than any we can make. The engineers are still undecided as to the amount of heating surface and grate surface required by the new flame, as the present boiler was only made to burn petroleum alone, not water fuel in addition, as it is far too small in cubic capacity of fire-place for the flame of the two fuels, which is, in fact, a new force, and one of great power.

On May 2 the small boiler beat the large experimental coal boiler of the yard in the cubic quantity of water evaporated per foot surface of grate: the figures were given in the *Mining Journal* of May 12. The cubic content of the fire-place to the local boiler was 62 ft., that of the oil boiler only 3 ft. 9 in. The following is a copy of the report sent in to the chief engineer of the yard at the time:—

Result of a trial, of 7 hours 25 minutes duration, of Mr. Richardson's Petroleum Boiler, on May 2, after steam had been up one hour, at Woolwich Dockyard:—

The once-run Bursiem oil was used against the best Pennsylvanian, and it proved of considerable more strength as fuel than its American cousin. If the English had been used throughout the trial a higher result than 202 lbs. of water evaporation per foot super fire would have been obtained per hour by 13 lbs. of oil. The American oil, from its volatile nature, appears more fit for lighting. The proportions of the Woolwich experimental coal boiler are given for comparison:—

	Petroleum boiler.	Coal boiler.
Area of fire per square foot	2·0	14·0
Total heating surface per square foot	176·0	398·0
Pounds of water evaporated per 1 lb. of fuel	14·70	8·0
Pounds of water evaporated per hour per sq. foot of fire	202·27	201·00
Pounds of fuel burnt per square foot of fire	13·76	25·00

Very little smoke during trial; 3000 lbs. of water evaporated. One furnace only of petroleum boiler in action. Average evaporation by Bursiem, once-run, per square foot of fire, 15·19 lbs.; average evaporation by American, 13·88 lbs. Experiments are now being made to obtain a perfectly smokeless fire, and an increased economy of the Petroleum.

34, *Kensington-square.* —— C. J. RICHARDSON.

CREASE'S IMPROVED BORING MACHINES.

SIR,—A nameless "Mine Adventurer," who wishes it to be believed that he writes from Porthleven—wherever that may be—is anxious that the public should know, with reference to my letter in the previous week's Journal, that—

"The engineering data given in last week's Journal rather confuses the matter than otherwise, for his conclusions do not follow from his premises. It would appear from Mr. Crease's statement that he requires 15 lbs. pressure at the machine—that is, in the end or the bottom of the shaft; and if this be so, Mr. Crease must be sadly out of his reckoning in supposing he will obtain it with a 2½-horse power engine at surface, for experience has proved that nearly seven-eighths of the pressure at the compressing engine is lost before the air reaches the working machine, even if it be only 300 yards distant."

If our "Mine Adventurer" had merely stated he was acquainted with a well-authenticated fact, that on a trial such results were obtained, and even that he himself superintended them, I should be quite willing to place the most implicit reliance on his word. I would even go further, for I could produce, under certain given circumstances, an example that should show that nineteen-twentieths of the pressure, or any other fractional part required, should be lost before the air reaches the working machine. I could still go further, and in the simplest form of experiment possible give results that at only 3 yards distance no power of the air shall reach the working machine.

For the information of our friend, and at the same time apologising to you, Mr. Editor, for occupying space with facts with which the general public are so well acquainted, I would inform him that any engineer can now regulate the pressure of air at delivery with such absolute certainty, that there shall be no appreciable loss of power, or only so much as he may from circumstances be induced to allow. I know of an instance where an even pressure is maintained for over three miles.

I shall soon have much pleasure in giving our friend many opportunities of studying the "mechanical details," and with them,—what, from the tenor of his letter, would not appear to be equally gratifying—so many opportunities of "modifying" his "views."

Tavistock, July 2. —— EDWARD S. CREASE.

MINING IN SARDINIA.

SIR,—This island, which seems to be of so little interest to English miners, is, nevertheless, one of the richest mineral points of Europe, and during the present depressed state of mining it is most certainly worthy of a great deal more attention than it has heretofore received. Most people, doubtless, are of the opinion that we ought first to try and improve our own mining operations, and invest more capital at home; to this I perfectly agree, but at the same time, as investment abroad still continues, the nearer home it takes place the better it will be for us. That there are many, and serious, drawbacks to mining operations on the island I am perfectly aware, but I shall endeavour to show that these drawbacks are completely overbalanced by the many advantages gained. The chief mineral produce of the island is silver-lead ore, but this is by no means the sole produce. Hematite zinc ores, both blende and calamine, are also found in enormous quantities, but very little has been as yet extracted, owing to the want of coals to smelt them, as the means of communication from the mines to the coast are very irregular and bad. There are several silver mines at work, and paying well. Two gold mines are also working near Dargali, in the Lagudoro. Copper is met with in most of the lead mines, and plumbago of an excellent quality is being extracted in the Sarrabus. Tin is the only ore that has not yet been found, but I feel sure that were some experienced Cornish tin miner sent to explore the granite formation, towards the centre and northern parts of the island, this valuable mineral would ere long be numbered among the many products of this truly mineral island. As the space that can be spared for me in these columns will be naturally small, I shall only endeavour to make some remarks on the principal drawbacks to Sardinian mining, and a few details of some of the principal mines in operation. The great drawbacks to mining operations are, first, the want of communication between the interior and the coast, for except one main road from Cagliari to Sassari, and another from Cagliari to Portescuso, there are few roads better than horse paths on the island. This is, however, now being remedied by the new railroad, which is to traverse the island from north to south, with several branch lines to the most important towns. The second difficulty to overcome is the scarcity of any fuel except wood, as no coal has been till now found on the island (except brown coal, which is found in one or two places). This difficulty might be soon done away with if companies who buy the ores were to charter vessels for the double journey. Coals could thus be delivered at any of the mines at the rate of from 35 to 37 francs per ton, whereas they now range from 50 to 55 francs, and by this means the ores which are now thrown away as not being rich enough to bear the carriage, might be profitable smelted on the spot. The last, but unfortunately not least, of these difficulties is the great prevalence during the hot months of malaria and marsh fevers, owing, I am led to believe, to the great scarcity of running water. This malaria, however, reigns chiefly in the plains and low valleys, and I only know of one or two cases were the mines are really unhealthy. Although the full complement of miners cannot be kept on during the summer, still a few may be kept all the year round to prepare the mine for the ensuing campaigne. This system has been carried out with great success by the able manager of the Gonnessa Mines.

The chief mineral district of Sardinia is in the province of Iglesias, towards the eastern side of the island. The formation is, according to General La Marmara Leniar, the silurian limestone and schist; others, on the other hand, contend that the formation is Devonian. I myself am inclined also to think the latter, from certain fossils found; however, I will leave that to wiser heads than mine to settle. There are two kinds of limestone—compact and foliated—under which lies the schist. The compact limestone is the chief mineral-bearing rock, but the lodes do sometimes enter the foliated limestone, though generally in a very contracted condition, and I only know of two cases where the lode continues through the schist—at Monte Vecchio and at Monte Nebida. The principal mines now at work on the island are—the Monte Vecchio Mine, near Guspini, belonging to the company of the same name; the Monte Poni Mine, leased by the Italian Government to the Monte Poni Company; and the San Giovanni Mine, belonging to Messrs. Taylor and Sons. All these several mines have been worked from time to time since the earliest ages, and in the old workings three very distinct eras are visible. The first of these, and also the most primitive, are irregular pits sunk in the softest part of the lode, and where only the richest ore has been extracted. The tools used at this epoch must have been either of an extremely soft metal, or some hard stone, for nowhere have I been able to find the vestage of a mark or scratch. In the second era these marks are, however, very visible, and from the look I should judge that a small instrument, like the French "pointerale," had been used. The art of mining must also have greatly advanced since the first workings, for these are altogether much more regular, and even small adits have been driven to cut the lode at different levels. The pits of this epoch were also much deeper; those of the first era never exceeding 10 to 15 fathoms, whereas some of these go down to 40 and 45. The third, and last, workings before the present ones are the so-called "Pisan workings." They are chiefly worked by fire, and are, altogether, of a very much more recent date than the others. Some splendid specimens of these workings are seen at the mine of San Giovanni. This mine will soon be known not only as a specimen of old workings, but as the model mine of the whole island. Of comparatively small value three years ago, owing to the difficulty of access, and to the unhealthy plains which surround it, it has now become, under the able management of Mr. R. W. Rickard, one of the best paying mines in the island. The difficulties at the outset were extremely numerous, but by steady perseverance, and the rare combination of theoretical knowledge, with practical experience, he has soon overcome them. Roads had to be cut up the side of the mountain through the solid rock, houses had to be built for the miners, and the lode had to be uncovered; for up till then nothing much more than surface workings had been executed. All this has been done in three years, and last year already they were extracting upwards of 15 tons of first-class ore per week, without taking account of the seconds and thirds. The average richness of these first-class ores is from 80 to 85 per cent. of lead, and 40 to 45 grammes of silver to the quintal of ore. This mine has certainly the best prospect of becoming second to none on the island, and that is saying a great deal, for Monte Vecchio, I believe, yields something like 4000 tons of ore a year. Another advantage that this mine has over most others in the island is that the company has establised some large washing-floors at Gonnessa, and by this means even the poorest ores are utilised. Two separate lodes are being worked at this mine, both having a direction north-east to south-west. The outcroppings of these lodes are visible for at least two miles in length. On the eastern side of the mountain side there is also a lode, or rather, I should say, a metalliferous cross-course, which was some 30 to 35 ft. wide at the surface, yielding capital ores for the mills. I must leave the remarks I have to make on the Gonnessa washing-floors, and one or two other mines, till my next. —— E. G. S.

THE PROTECTED GUNPOWDER.

SIR,—On August 26, 1865, you did me the honour to publish some strictures of mine upon the patent of Messrs. Gale and Saunders, for preventing the explosion of gunpowder by mixing it with various proportions of powdered glass. Your readers will remember that I then considered it not only impracticable and valueless, but fraught with danger. I showed the perfect impossibility of introducing it on board ship, even supposing it to be feasible on shore. I will not here recapitulate my former objections, none of which have been met, but will proceed at once to offer some remarks upon the experiment at the Martello Tower, and describe the results of my own experiments. Through the kindness of the captain-superintendent of the Royal Laboratory at Bull Point, Devonport, I had placed at my disposal not only the proof mortar and all the gunpowder-proving appliances, but the services of the proof serjeants and the staff who conduct the powder-testing experiments at that establishment; with this valuable assistance I have been able to carry out a series of accurate investigations, by which I have not only proved the correctness of my former position, but have demonstrated that the so-called non-explosive powder is, when confined, perfectly explosive. So explosive is it, that I should have no doubt of being able to blow up the said Martello Tower with one-fiftieth part of the materials which it contained, mixed in the same proportions, but rather differently arranged; and if the patentees will meet me at Plymouth, and provide any quantity of their protected mixture, from a few pounds to a few hundredweights, I shall be happy to show them to what extent they have deceived themselves, by imagining that their protected powder cannot be made to explode. It will be impossible here to explain the one-sided character of the experiments that have been put before the public: indeed, I could fill every column of the Journal with an exposure of the fallacies to which they lead. The surface alone has yet been exhibited; let us go a little deeper into the subject.

First, with regard to the sifting process, which Mr. Bidder says can be conducted so rapidly that a man and two boys, or a boy and two men, could supply an 80-gun ship in full action; I leave this assertion in the hands of naval men to deal with, the general public not being qualified to form a very accurate opinion on the subject. Every naval officer with whom I have conversed ridicules the idea. The experiments upon which the *ad captandum* assertion is based have been made with powder, according to the report in the *Times*, about as coarse as coffee berries; such powder, when placed in a sieve almost as coarse as a cinder sieve, could be easily separated from the glass dust with which it is mixed, but we are told nothing about the sifting of the fine powder used for fire arms, such as the Enfield and the Whitworth rifles, which is itself so fine that portions of it will even pass through a sieve of 72 apertures to the linear inch, or 5184 to the square inch. Thousands of tons of this powder are stored in the country ready for use. In the neighbourhood of Plymouth alone, I am informed, there is enough to blow up the whole port, and this must be dealt with by the patent process, or it is only half a scheme. I should like to know how fast Mr. Bidder thinks he could sift this fine powder; it occupied me more than half an hour to sift a single pound, and there was a considerable quantity of glass still left in it. Between these two extremes of coarseness and fineness there are many gradations of size, according to the purpose for which the powder is required. I have submitted most of these to experiments, and find that after the glass and powder have lain in contact some four or five months no amount of sifting will again completely separate the two. Sift as much as you will, there is the glass still sticking to the powder, whilst the following effects are produced in addition. The gunpowder loses its glossy surface, and is thereby deteriorated. It absorbs moisture from the glass, and in spite of the particles of the grains rubbed off by sifting, which are clearly discernable amongst the sifted glass, actually increases in weight; and it, moreover, becomes decidedly softer, so as to crush easily under the fingers. The very appearance of the powder after sifting, as compared with the original sample, condemns it at once as useless for artillery purposes. I have elsewhere shown that glass, under all ordinary conditions of the atmosphere, invariably contains moisture. The electrician knows this to his cost, as he is always obliged to warm or varnish his glass surfaces to prevent them from attracting moisture. A pound of powdered glass contains from 30 to 60 grains of moisture, which will evaporate from it at a temperature below that of boiling water; but the glass has such an affinity for moisture that it will re-absorb more than half this quantity before it gets cold. It is not, then, surprising that powdered glass, instead of protecting powder from moisture, as stated by the patentees, actually makes it damp when mixed with it. So much for the mixing and sifting, about which we have heard nothing, except in relation to powder at least as coarse as peas or the coarsest sand.

We will now consider a class of effects about which we have hitherto heard nothing, but which, after all, are of the most vital character, since upon them alone the whole question of practical applicability rests. The question of sifting is a matter of mechanical adaptation in relation to economy of time and space, but the influence upon the strength and chemical action of the powder is, after all, the grand question which must determine the utility of the plan. In December last I caused several samples of gunpowder, corresponding with the kinds in ordinary use in the service, to be mixed with four times their weight of glass-dust, of the same kind as that supplied to Mr. Gale when he was in Plymouth, and at the same time I reserved other portions of the same samples of gunpowder for future comparison. All the samples were kept carefully excluded from the air until May of the present year, when a fine dry day was selected for the experiment. Portions of the mixtures were sifted, but with the results before mentioned—the obstinate retention of portions of glass by the powder, the destruction of the glossy surface, the absorption of moisture, and partial softening of the grains. One pound of powder, accurately weighed before mixing, was found after sifting to have increased 19 grains in weight by the absorption of moisture. These samples were then fired in the ordinary charges of 2 ozs. each in the proof mortar, carrying a 68-lb. shot, and were compared with corresponding charges of the neat powder which had been reserved for this purpose. Averages of three, and in some cases six, experiments were taken; the general results showed a loss of about 10 per cent. in strength by the powder which had been subjected to the glass protection, whilst the following remarkable effect was produced:—The mortar, after each charge of the doctored powder had been fired, was thickly coated with a red scaly deposit, which, when scraped off, looked like thin scales of shellac. The half of the shot next the powder, as it lay in the mortar, was similarly coated, presenting a curious appearance as the shot slowly turned on its axis throughout its trajectory. It was found necessary to remove these scales and wash the mortar between each charge. Some of these scales having been folded in a piece of paper and put into the pocket, soon became spontaneously so strongly heated that it was found necessary to remove them. Of this curious pyrophoric substance more another time. In order to ascertain if four parts of glass would really prevent powder from exploding when confined, an extremely small charge of neat powder was placed in the mortar, and a charge of protected powder upon that; the shot was then put in, and on discharging the mortar a range was obtained considerably greater than with the small charges of neat powder alone. This was due to the explosion of part of the protected powder only, the rest having been blown out upon the ground, where it lay blazing. This experiment pointed to the fact that more of the protected powder would have exploded had it been longer confined, and the resistance to be overcome greater.

Much having been said respecting the tendency of gunpowder to come to the surface of the mixture by the action of specific gravity, during carriage or vibration, a small keg was filled with the protected powder; an ordinary wooden time fuse was inserted in it. The keg and its contents were then submitted to the same kind of vibration for a few seconds as would be produced by its conveyance in a cart over some 30 or 40 yards of ordinary ground; the fuse was then lighted, and presently a strong explosion occurred, blowing the fragments of one of the heads to a distance of 50 or 60 ft. in one direction, and the keg several feet in the opposite one, whilst a considerable quantity of the protected powder was thrown out blazing on the ground. The pyrophoric property, which I doubt not has also been noticed at the Martello Tower, was here again manifest, for when the action was supposed to have ceased the protected powder again took fire on turning it over to examine it, and blazed up with great violence. Feeling convinced that the explosive power of the protected powder only required a sufficient amount of resistance in the containing vessel to enable it to exert its full effect, I determined a few days afterwards to try it in a shell. Accordingly, on that occasion a 10-in. shell, the bursting charge of which is 6¼ lbs. of gunpowder, was selected for the purpose: into this was put 6¼ lbs. of the protected powder, containing only 1¼ lb. of gunpowder, with 5 lbs. of glass; this small quantity of gunpowder would not, of course, even in the unmixed state, be sufficient to burst the shell, and the expanded gases would, therefore, simply blow out with great force through the aperture of the fuse. The point to be ascertained was how much of the protected powder would ignite when thus confined. A small quantity of loose powder, in the form of a two-dram cartridge, having been attached to a bit of quick match, and inserted into the shell, a 20-seconds time fuse was screwed in and fired: as soon as the fire had communicated to the interior the whole of the contents instantly went off with a tremendous roar, throwing out a jet of fire to a height of between 20 and 30 feet, evidencing an expansive force within that would have burst a slighter shell. This experiment satisfactorily demonstrated that where the protected powder

is stored in any considerable bulk, and in a confined space, its explosive force is just in proportion to the resistance which it has to overcome. Thus, a portion of protected powder introduced into such a receiver as a strong steam-boiler, or a caisson, would entirely explode and readily burst it, whilst the same quantity introduced into a cask would just throw the head off, and consume only in part, as was the case at the Martello Tower. In this experiment with the shell the tendency to subsequent spontaneous ignition was very apparent. After waiting a sufficient time it was determined to remove the fuse; the lower end of this was partly melted from the intensity of the combustion. By means of a scraper portions of the contents were dug out; these consisted of agglutinated particles of glass, exhibiting the spaces in which grains of powder had been enclosed. In a few minutes the portion of the interior which had been exposed to the air began to glow with heat, so that paper thrust into it was rapidly kindled, as were loose grains of gunpowder which were subsequently dropped in. The whole of the powder had evidently exploded, since any remaining portions would have been kindled by the subsequent heating of the interior. As more of the contents were dug out the heat of the remainder increased, and it was, therefore, determined to let the rest remain, and watch the result. The shell gradually increased in temperature, until at the end of two hours it was impossible to keep the hand upon it. After this period it very gradually cooled down.

From these experiments I draw the following conclusions:—1. That when confined the so-called protected or non-explosive powder is as explosive as unprotected powder.—2. That in the ordinary process of carriage the gunpowder separates itself from the glass in quantities sufficient to explode and do great damage.—9. That the powder, after having been mixed with the glass and again separated, undergoes changes which injure its quality and reduce its power.—4. That it fouls the interior of the gun, so as to render it necessary to wash it thoroughly after each charge.—5. That in its application to "small arms" this fouling must necessarily injure the interior of the rifle.—6. That although glass dust may be mixed with very coarse powder and separated from it again through coarse sieves, after having lain a short time together, yet the process of sifting, after some months of union, fails to detach all the glass dust, whilst the powder loses its glazed surface, and becomes itself friable.—7. That with the fine powder used for small arms, which constitutes a very large proportion of that in use in the service, the process of sifting would be tedious, incomplete, and impracticable.—8. That since it would be perfectly impossible, under any circumstances, to sift powder and make it up into cartridges rapidly enough to supply a ship or battery during an engagement, or even a regiment of soldiers during or on the eve of a battle, it follows that powder thus necessarily kept in the form of cartridges, &c., of which there are immense stores in many parts of the kingdom, could in no wise have the protecting process applied to it.—9. As all powder must be made into cartridges of exact dimensions and weight, and as it is impossible to afford space for this operation as well as the sifting process on board ship, it never can be used at sea. No one has ever doubted that gunpowder can be rendered non-explosive by many processes, but the question is, to what practical use can the fact be turned?

When the report of the Ordnance Select Committee comes before the public, it will be seen whether the results which I have arrived at are worthy of any consideration or not, and whether the old scheme, thus revived, has made any successful effort to rescue itself from the oblivion to which practical men consigned it years ago.—*Plymouth, June 3.* JONATHAN N. HEARDER,
—— Electrician and Consulting Chemist.

PROSPECTS IN THE GWENNAP AND LOVELL DISTRICTS.

SIR,—No period in the annals of mining has presented a more favourable opportunity for the investor than the present. That the time has now arrived to make a selection for investment in Cornish mining is evident from the fact that a reaction has set in in the price of metals. The tin market, which has been for a long time in a depressed state, is beginning to show signs of animation, and all fears as to any further fall in price has been dispelled by the announcement of the supplies from Banca beginning to fall off. I had intended in this letter to have given a description of the deposits of tin as found in this island, from which it might be plainly seen that the supplies from that country are anything but of a permanent character, and that the English tin miner has nothing to fear as to the ultimate result. This, however, I must delay for another week, and remind my readers that it now becomes my duty to give some account of my stewardship, beginning with the Gwennap district.

I have much pleasure in stating that the lode at WHEAL ROSE alluded to in several of my former letters has been met with in the bottom level cross-cut, and is, perhaps, one of the best courses of ore discovered in the county for years. Suffice it to say, in the level above it proved to be from 8 to 10 ft. wide. In the bottom level it has been cut into 3 to 4 ft., all ore of the finest description, with no appearance of any south wall. This will soon lead to a resumption of dividends, and also tells well for the adjoining mine, Great North Downs, which I have so often recommended to my clients,

AT NORTH CHIVERTON, I am happy to say, at no period of its history has it presented such indications of ultimate success. In the 70 fm. level end, driving east, they are now getting under the run of ore ground passed over in the level above. Some idea of the importance of this driving may be gleaned when I state that the level over this produced within the last two years about 2000*l.* worth of mineral. This run of ore ground has now been met with in the level below, and from which good returns are being made; but I have often stated that all the eastern ends, although producing well, are of minor importance when compared with the western ground. This will very soon be brought to a practical result, for within one month from this date three ends—the 50, 70, and 80—will be driving into this ground, in a lode averaging in size about 4 ft. wide, composed of lead and copper, mixed with gossan, of such a description as I have never known to fail yielding large deposits of mineral. The lode in the 50 fm. level, which has been driven into this ground the furthest, is in places 10 feet wide, carrying a beautiful gossan, mixed with lead, and from the nature of the ground which they are now getting into I should not be surprised at any time to hear they have discovered a deposit of lead second to none in Cornwall. It may not be out of place here to recommend parties investing in mining to go into concerns having large lodes, the chances of success being tenfold, for when a large lode strikes into ore the mine is almost immediately in a dividend state.

Referring to the tin market, and tin mines, it is pleasing to see that the price or foreign tin has already taken the initiative in the rise, which will soon be followed by that of English. The tin smelters, in some few large mines, are already on the alert, and are anxious to contract for their tin during the ensuing six month, at higher rates. The demand for this article from America, the paucity of which has long been the chief cause of such depression, is again likely to become greater than it has ever been. The advancement of science has caused tin to be introduced into the manufacture of woollen goods in the place of indigo for dyeing purpose, thereby causing a greater demand; which, coupled with the falling off in the supplies from the Dutch settlements, makes it evident that the Cornish tinner may congratulate himself that he has passed through his gloomiest days, and that a reaction is imminent. Following this will be a rush for tin mines stock, for which the present affords more than an ordinary favourable opportunity. There is really no mystery as to the mines to be purchased in, for if the speculator will only bring common sense to bear on the question, he would first enumerate those mines which have been able to "tide over the current," and pay costs, and those which have continued to pay dividends throughout such depression. It must be evident to all that if a tin mine can pay dividends at the late price of tin, that on a reaction taking place, and a higher price being obtained for its produce, those mines must prove to be valuable properties. Such, for instance, as Great Wheal Vor, East Lovell, Dolcoath, Tincroft, and a few others, are mines whoever goes into at present rates will ere long double their principal, besides the increase of dividends.

The cheapest tin mine I know of in the county is EAST LOVELL, a dividend-paying mine, and the price, taking its prospects into account, comparatively nothing. Time will not admit of going fully into the merits of the mines of this district on the present occasion, but in my next I will endeavour to draw some practical illustrations, showing that whoever chooses to follow my advice relative to these mines will have no cause to regret it. CHAS. BAWDEN.
St. Day, Scorrier.

BOILER EXPLOSIONS.

SIR,—I desire to add my testimony to the importance of strengthening all boiler-tubes with encircling hoops, or, at least, with segments of angle-iron around the upper part of the tubes, and then staying them to the shells, as referred to in the letter of Messrs. Hocking last week. In practice I have seen two boilers in succession, of 6 ft. diameter, with a single tube each of 3 ft. 10 in. in diameter, made of ½-in. plates by one of the best firms in the kingdom, fail by collapse of the tubes at 40 lbs. pressure. There was no explosion, but a very extensive bulging of the tubes on both sides along the whole length of the fire-place, just over the fire-bars. In the first instance, I was inclined to attribute it to the feed being allowed to run too low, but then I considered the back of the tube would have been the part to suffer first, and this had not bulged at all. In the second case I watched it carefully from the commencement of the collapse, seeing its progress for days, until I felt satisfied that the want of feed was not the real fact, but that it must be referred to another cause.

My own opinion is, that the strength of the *arch principle* embodied in the tube is not nearly equivalent to the disadvantage suffered by the loss of tensile resistance, which the shell of the boiler always retains. All boiler-plates, not excepting those made of the very best iron, consist of a series of laminæ, overlapping and interweaving each other, produced by the process of rolling. These, when subjected to lateral pressure in the case of the shell, are supported by the tensile force; but in the case of the tube, the lateral pressure of the steam is brought to bear upon the laminæ without the tensile force to support them, inasmuch as the lateral pressure tends to reduce the curve to a straight line, so that I feel convinced that the resisting force of the iron in the tube is scarcely 40 per cent. of that in the shell. I would not, therefore, erect any tubular boiler without first strengthening it with hoops and stays.

The importance of the subject is my only excuse for troubling you with the above remarks.—*Mwyndy Iron Ore Mines, South Wales, June 27.* W. VIVIAN.

THE ASSOCIATION FOR THE PREVENTION OF STEAM-BOILER EXPLOSIONS, AND FOR THE ATTAINMENT OF ECONOMY IN THE USE OF STEAM.—The monthly meeting of this Association was held at the offices, Corporation-street, Manchester, on June 26, Mr. William Fairbairn, C.E. (President), in the chair, when Mr. L. E. Fletcher, chief engineer, presented his report, of which the following is an abstract:—Two cases of fracture accurred at the bottom of externally-fired boilers, and at the ring seams of rivets over the fire. Four cases of external corrosion were found in 'wagon' boilers, and at the bottom of the side pockets where they rest upon the brickwork seating, the corrosion extending longitudinally for a considerable distance, and in some places reducing the thickness of the plates to one-sixteenth of an inch. Another instance of external corrosion was met with at the bottom of a Cornish boiler, round the joint of the blow-out pipe. The cross walls at this part are apt to be too thick, and to promote while they conceal the wasting of the plates. They should be recessed, so that the whole of the blow-out pipe may be in front of the wall, instead of any part of it being buried in the brickwork, as it is too frequently found to be. The blow-out tap referred to could not be closed after testing, on account of the box key running round and round on the head of the plug, through the dilapidated state into which they had been allowed to fall, so that the boiler was drained of its water, the furnace crowns laid bare, and brought up to a red heat before the fires could be drawn. Two explosions were simply illustrations of the danger of plain egg-ended externally-fired boilers, especially when fed with sedimentary water, their treacherous character being clearly shown by the fact that both exploded so shortly after they were repaired, while one of them had been laid off for cleaning and examination, and passed as safe but the day before, it burst.

FATAL BOILER EXPOSION AT MARLEY HILL.—The inquest upon the four boys who lost their lives by the fatal boiler explosion at Andrew's Houses Colliery, has resulted in a verdict that the boys were killed by the explosion, but that what caused the explosion there is no evidence to show. It is a singular fact that the engineman and fireman, though both attending to their duties, were uninjured. The boiler had been in use seven years, and had only recently undergone repairs. It was a strong boiler, weighing about 5 tons. There was no want of water, and there appears to have been no undue pressure of steam. The fireman had just come across the boiler about a minute before the explosion took place. It appears that the steam was slack, and he had gone expressly to make an examination when he found that the steam was as low as 25 lbs., or 7 lbs. less than the pressure at which it was usually worked; and, after the explosion, the place where the boiler had been was flooded with water. Science, therefore, appears to be completely at fault in attempting to account for the accident, though, of course, the facts will have to undergo the most searching investigation.

BOILER EXPLOSIONS AT MINES.—I write to thank you for your repeated efforts to arouse the attention of Cornish engineers to the destruction of mining property, and the loss of life occasioned by steam-boiler explosions. I feel indebted to Messrs. Hocking and Son for their information relative to the late explosion at Wheal Uny, but am perfectly at a loss to account for the extraordinary note attached to their account, professing to give us the opinion of Mr. L. E. Fletcher, of Manchester, in the following words:—

"I gather from your letter that the safety-valve was free at the time of the explosion, and that the pressure of steam was little, if any, in excess of 40 lbs.; possibly a pound or so from blowing off. Taking this to be the case, I cannot doubt but that this flue collapsed simply from weakness. You will observe it did not fall over the fire, where it would have suffered most severely from shortness of water. *I have no hesitation in saying that all boilers with as large a flue as this one had—4 ft., and 30 ft. 8 in. long, made of 7-16ths plate—can only be worked with steam of 40 lbs. on the square inch at considerable risk. All such flues should certainly be strengthened with encircling hoops, and the sooner this is done the better.* I do not doubt that many might work on, and escape explosion, for many years, but you are aware that boiler-work is never very accurate, and many flues that appear to the eye and pass as being quite round, would be found on measurement to be as much as an inch, or upwards, out of truth; thus the principle of the arch is at once lost, and the power of resistance in the tube very much reduced. These variations in the shape of the tubes will account for the apparent anomaly of some boilers failing while others do not." Is Cornish engineering come to this? What! is the mere dictum of an engineer of little or no experience in mine boilers to reconcile us to the loss of life and property? No, Sir, we want facts, not opinions; we want action in this matter, not mere dreams. Let Hocking and Son give us the results of careful experiment, as they are very well able to do, and the mine adventurers of this county will feel thankful for the favour conferred, and, doubtless, contribute to meet the expense. The flue of the Wheal Uny boiler might have collapsed from weakness, or the flue of any other boiler may be worked so long as to wear it out, and then, of course, a collapse *may* follow, but even in a state of weakness a flue is more likely to break out into holes then burst. But the object of Mr. L. E. Fletcher's note is undoubtedly to convince us that if we work our boilers with a pressure of more than 40 lbs. on the square inch we must not complain if we find them blown to pieces, our engine-houses knocked down, and our workmen killed or wounded. But how many Cornishmen of mining experience will believe this, if they have to put their hands into their pockets and pay the expense of these explosions? Very few indeed, I trow, Sir. I have examined many boilers after explosions, and I have never, in 30 years' experience, known a single case of a tube collapsing when the top of it has been properly covered with water. In every case I have found the top of the tube has exhibited unmistakeable indications of being heated very hot in the absence of water. Let every boiler be tested by hydraulic pressure at 100 lbs. on the square inch before use, and let our engineers ascertain before a boiler is purchased that the tube is perfectly circular, and then a boiler, until it gets old, may be worked at 50 lbs. to 60 lbs. on the square inch, without exploding. I am aware that a boiler when heated by working at a high pressure of steam, from 40 lbs. to 60 lbs. on a square inch, is not so strong as when cold, and the vibration of the steam at each stroke of the engine probably has a tendency at each shutting of the steam-valve to increase the pressure at that instant; but, after all these deductions are made, nothing will convince us but careful experiment that there is the least necessity for the waste of property caused by boiler bursting. The men put in charge of steam-engines ought to know their work, and when they neglect it they ought to be subject to punishment, as much as the driver of a locomotive. A man might as well have his limbs or his head broken, or his friends killed, by a railway accident as by a boiler explosion. The recommendation of Mr. Fletcher to strengthen the tube by iron hoops may be worth the attention of mine agents—at least all new boilers can easily be so constructed without much additional cost, but nothing will prevent accidents if the men in charge neglect their duty. The best method for safety is to apply an apparatus to the boiler to let off the steam the moment the water gets within one inch of the top of the tube. I hope the Royal Cornwall Polytechnic Society will offer a prize for the best apparatus for this purpose at the next meeting; and also for the five engineman who have worked steam-engines most economically for twelve months.—DELTA: *West Briton.*

PETROLEUM IN NEW SOUTH WALES.

We have been favoured by Mr. John Mackenzie, formerly of Wigan, whose name is already well known to the readers of the Journal, with a highly interesting account of what is now doing with the Hartley Boghead Cannel Coal. Mr. Mackenzie resigned his appointment of Government Examiner of Southern Coal Fields, so as to be enabled to take up land containing the Hartley Boghead Cannel coal, and work it (the Government not permitting their officers to embark in private enterprise, and of late also denying them the privilege of reporting on mineral property for private individuals), a satisfactory evidence of the value he attaches to the deposits in a commercial sense. Mr. Mackenzie writes that he learns from the *Mining Journal* that there is great excitement about shale in England, and that we have numerous companies commencing to extract oil, now that the supply from the American oil wells is decreasing, and that the Americans have put 10d. a gallon duty on their refined oil. The Hartley Cannel is so rich, and the oil of such excellent quality, that they expect to be able to compete successfully with the refined oil in the English and other foreign markets. The cost of extracting oil, refining it, and delivering it in Sydney, is about 1s. 8d. to 2s. a gallon; in fact, it is supposed by many that it will cost less than 1s. 8d., but he estimates it at from 1s. 8d.

There are four different companies making oil. Messrs. Samuels and Want (Hartley Kerosene Company), from Cannel, yielding 140 to 150 gallons to the ton. The Australasian Mineral Oil Company, who have erected works in Sydney Harbour for extracting and refining oil, &c., and up to within a few weeks have been getting their Cannel coal from Mr. Russell's Stony Creek, near Maitland, but they find that the Stony Creek Cannel yields such a small quantity of oil per ton that they are letting the mine, and will have to get Cannel from or near Hartley. The third shale works are those of Mr. Graham, at Wollongong, the shale yielding about 40 to 50 gallons of crude oil to the ton. The fourth is a very small place at Penrith, 34 miles on the Bathurst side of Sydney, where Mr. Wilson gets Hartley Cannel, and extracts and refines the oil from it. Hartley is destined, in his opinion, to be the greatest shale and Cannel coal producing district in New South Wales, or he would not have relinquished his Government appointment to take up land there. His reasons for saying so are, that having been over the greater portion of the New South Wales coal basin, he is of opinion that the Cannel, as rich as it is at Hartley, is not very likely to be found in places so conveniently and economically situated for railway transit to the sea coast; and there are not many places where the seam crops out to the day where it could be worked to a profit that it is likely to be found.

Mr. Mackenzie has enclosed a tracing (which can be seen at our office), showing the land taken up at Hartley by different persons, and the places where the Cannel is proved, and where the seam has changed into stone, ironstone, fire-clay, &c. The Great Western Railway will be opened to Hartley in about 12 months from now. The price for taking the refined oil from Hartley to Sydney, a distance of about 74 miles, will, it is anticipated, be 2d. to 3d. a gallon. The seam of Cannel varies very much in its character, like the Boghead Cannel of Scotland, which, from what he had read, appears to be in a patch of some 1¼ to 2 miles in diameter, and finding other patches in Australia, leads him to think that there may also be other patches in Scotland.

The largest patch at present proved at Hartley appears to be in the Grose, and this Mr. Mackenzie has acquired. The Sugar-Loaf Patch is about 21 miles diameter. Mr. Mackenzie's party are now working the Cannel on their 170 acres (or Sugar-Loaf Patch), and they had just proved a second seam of Cannel on the same patch, although the seam had only been sought the same morning. It is very curious to see the way other seams of coal gradually change into good Cannel.

THE NEW SOUTH WALES COAL FIELDS.—At the Manchester Geological Society meeting (Mr. E. W. Binney in the chair) specimens of coal from West Maitland, New South Wales, sent by Mr. John Mackenzie, M.E., formerly of Wigan, were laid upon the table. These specimens were stated to be superior to the celebrated Boghead coal; one sample yielding 145, and the other 125 gallons of crude oil, while the Boghead coal had never been known to yield more than 120 gallons, and some specimens only yielded 70 gallons to the ton. The coal in New South Wales was like the Scotch, very variable in character; and as the Scotch deposit would, probably, soon be exhausted for the manufacture of paraffin oil, this discovery is of great importance.

Meetings of Mining Companies.

NORTH SHEPHERDS MINING COMPANY.

A general meeting of shareholders was held at the offices, New Broad-street, on Monday,—Mr. CHARLES PHELPS in the chair.

The notice convening the meeting having been read, the minutes of the last were approved. A statement of accounts was submitted, which showed a debit balance of 303*l.* 7*s.* 3d. The report of the agent was read, as follows:—

June 30.—The 40 fm. level is driven 77 fms. west of the engine-shaft, and there remains a distance of 3 fms. 3 ft. to drive it under Rye's shaft. The lode in the end is 20 in. wide, producing good stones of lead ore. About 17 fms. behind the present end there is a very loose and hollow lode gone down in the bottom of this level, which would turn out about 4 cwts. of silver-lead ore per fm. We commenced a winze to prove its value, but could not sink it more than 2½ feet, on account of the large stream of water issuing from the vugh. The 30 fathom level is driven 7 fms. 3 ft. west of Rye's shaft. The lode in the end is 15 inches wide, containing a little lead ore; the men in this end have been engaged during the past six weeks in rising against and cutting down Rye's shaft. Rye's shaft is cut down and secured to the 30 fm. level, and the plat is almost completed. The 20 is driven 62 fms. west of Rye's shaft; the lode is 1 ft. wide, composed of flookan, quartz, and a little carbonate of iron. We calculate to cut the new south lode in about 10 fms. south from the 20 end. The distance may turn out to be a little more or less, as it depends on the underlie of the new south lode, which we have not seen many fathoms below surface. We consider it highly important to see this lode in the 20, as when seen in the flat-rod shaft it was of a very promising character. To carry on the mine it would be advisable to drive the 50, west of engine-shaft, under the winze sunk 2½ ft. below the 40; and as the said winze is 60 fms. west of the shaft, it would require the labour of six men for seven or eight months to get under the said winze. The engine is working well, and keeps the water by five stroke per minute.—THOMAS RICHARDS.

The CHAIRMAN moved that the report be received and entered on the minutes, and that the accounts be passed and allowed. He mentioned that Capt. T. Richards was present, and would be glad to afford any information beyond that contained in the report that shareholders might desire.

Capt. RICHARDS, having alluded to the chief points in his report, expressed an opinion in favour of a good mine being opened out at an increased depth, mentioning that both East Wheal Rose and Old Shepherds were most productive below the 50 fm. level.——Mr. TREGELLAS asked what time it was computed would be occupied in driving the cross-cut south to cut the south lode?——Capt. RICHARDS replied that he estimated it would occupy between two and three months. He considered that an important point to be reached. If it were wished to economise the outlay as much as possible by continuing those operations only that were likely to lead to immediate satisfactory results, he should suggest that the cross-cut south and the driving of the 50 should be continued. He mentioned that the shaft had been down to the 50 something like 12 months, although driving had not yet commenced.

Mr. HUME urged the desirability of keeping the shaft sinking, for by so doing there were much better chances of making discoveries than by continuing the driving of the shallow levels, and enquired what length of time it would take to sink another 10 fms.?——Capt. RICHARDS replied about three months or three months and a half.——Mr. TREGELLAS thought it most advisable to sink another 10 fms.

Capt. RICHARDS, in reply to a question, stated that he should not advise the driving of the 50 east for the present.——Mr. TREGELLAS asked if anything had been done with the view of opening out the iron lode?——Capt. RICHARDS replied in the negative, stating that it could be tested for a comparatively small amount. The adjoining mine has produced thousands of tons up to the present time.——Some discussion arose as to the most important points of operation to be continued, from which the general opinion appeared to be that the cross-cut in the 20 should be continued, and the 50 fm. level west driven. The report was ordered to be entered on the minutes, and the accounts were passed and allowed. A call of 10s. per share was made. A vote of thanks was passed to the Chairman, which terminated the proceedings.

PROSPER UNITED MINING COMPANY.

A general meeting of shareholders was held at the offices, Austin-friars, on Tuesday,—Mr. JOHN KILNER in the chair.

Mr. J. H. MURCHISON read the notice convening the meeting, and the minutes of the last were approved. A statement of accounts was submitted, which showed a nett debit balance of 1924*l.* 13s. The report of the agent was read, as follows:—

June 30.—During the past four months the 90, east of Hand's, has been driven 15 fms. 4 ft. 4 in., laying open tribute ground. The 90, west of Hand's, has been extended 16 fms. 3 ft. 2 in.; the lode in the end is 3 ft. wide, producing 1⅛ ton of copper ore per fm., and as there is a long run of productive ground gone down in bottom of the 80 we expect the 90 will be very productive. The 80, west of Hand's, has been driven 15 fms. 1 ft. 7 in.; the lode is 3 ft. wide, averaging 3 tons of copper ore per fm. There is a winze sinking behind this end which is yielding 3 tons of copper ore per fm. The 70, west of Hand's, has been driven 4 fms. 4 ft. 9 in. The lode has gradually improved; it is now 2¼ feet wide, worth 10*l.* per fm. for copper and tin, and has a good appearance for continuance. The lode in the 50 west is 2 ft. wide, saving work for tin. The 40, west of Hand's, has been driven 19 fms. 3 ft. 7 in., laying open some productive ground. This end is now under the new shaft, and we shall soon commence rising to form a communication. The shaft is down 28 fms., and we expect to hole in two months time. The 80, east of Hoskin's, has been driven 4 fms. 0 ft. 6 in.; the lode is gradually improving in appearance, and we shall soon meet with the long run of tinny ground gone down in the bottom of the 70. The 70, east of Hoskin's, has been driven 9 fms. 3 ft. 11 in,, worth 9*l.* per fm. for tin, and the end has a good appearance for improvement, The 70, east of Louisa's, has been driven 14 fms. 2 ft., laying open some tribute ground. The 60, east of Louisa's, has been driven 8 fms. 4 ft. 3 in., without meeting with any mineral to value. There has also been 137 fms. 0 ft. 6 in. of ground spent in winzes, cross-cuts, shafts, &c., making a total of 270 fms. 4 ft. 7 in. The tribute department consists of 56 pitches, working by 140 men, at an average of 10s. 10d. in 1*l.* These pitches are producing about the usual quantity of copper and tin. We have also a very large quantity of productive tin ground in reserve, which can be profitably worked when tin improves in price. The prospects are better now than at any former time during the last ten months, the 90 being productive, with 25 fms. of ground gone down rich in advance. The 80 end good, with excellent prospects for the future. The 70 into profitable ground. The 70, east of Hoskin's, laying open tinny ground, and the 80 end likely to soon improve. The water has considerably decreased, and the only thing now wanting are fair prices for tin and copper to enable the mine to leave profits. Number of hands employed, 402.—JOHN NICHOLLS.

The CHAIRMAN moved that the report be received and entered on the minutes, and that the accounts be passed and allowed.——Mr. C. WESCOMB (the purser) called attention to the fact that the mine was returning quite as much ore as he had expected, the average return of copper having been 375 tons per month, and of tin 12 tons per month. The price obtained for copper during the period embraced in the former accounts was 3*l.* 15s. per ton, and no one connected with mining supposed at that time that copper would have fetched a less price, but the average price for the past four months had been reduced to 2*l.* 18s., showing a difference of 17s. per ton, or a total loss on copper alone of 1235*l.* From the same cause (the reduced price obtained) they had lost over 300*l.* on their tin ores. He now hesitated, however, to offer any opinion as to the future, but would call attention to the following points:—First, the mines would now pay good profits, if the price of metals were to advance to the average at which they stood prior to 1865; but unless better prices were obtained for the produce the costs of the mine would not be met by the returns.—Secondly, the water charge was very heavy; there were three very large and powerful steam-engines constantly at work pumping the water, and they had as yet been unable to sink deeper this season. The costs cannot well be reduced below 2000*l.* per month; the fixed charges in a mine, with seven steam-engines for pumping and drawing, are always heavy.—Thirdly, the largest shareholder has sent a notice of resignation of his shares: therefore, the necessary calls for future operations will have to be made upon a reduced number of shares. He added that the lessors have, in a very liberal manner, agreed to reduce the dues to 1-30th instead of 1-20th, from Christmas last.

Capt. J. NICHOLLS (the manager), replying to a question, stated that there had been sold during the past four months quite as much ore as he had expected, and that the mine never looked better than at the present time.——Mr. WESCOMB mentioned that the number of shares upon which future calls would have to be made was 3849. The copper ore and tin sold from the date to which the accounts were made up would meet the expenditure up to the present time within 200*l.* to 300*l.* per month, so that a call of 10s. per share would meet all the present liabilities.——Capt. NICHOLLS said that the present reserves of copper in the mine were about the same, while the reserves of tin were much larger than they had ever been.——Mr. HARTRIDGE enquired if it would not have been politic to have taken away more tin?——Capt. NICHOLLS said that if better prices could have been obtained more tin would have been raised.——Mr. FAUNTLEROY asked what difference had the fall in price made in the amount of their receipts during the past four months, as compared with former prices?

Mr. WESCOMB said, taking only the average prices of tin and copper, to say nothing of what the difference would have been if the highest prices were taken, the amount of tin and copper sold during the past four months realised less by 2500*l.*, and if higher prices had been obtained, the quantity could have been increased.——Mr. BARGE asked Mr. Wescomb what policy he should recommend to be adopted during the present depression in the metal market?——Mr. WESCOMB said that although he was a large shareholder he was perfectly willing to adopt whatever course the meeting considered best.——Mr. EDWARD COOKE said that there seemed every reason to believe that with a reduced rate of discount the value of metals would advance.——Mr. WESCOMB, in reply to a question, stated that with metals at the present price the mine could be continued for three months, at a loss certainly not exceeding 5s. per share upon the 3849 shares.——Mr. E. COOKE asked if the whole of the bills were charged up to the date to which the accounts were made up?——Mr. WESCOMB, while thanking Mr. Cooke for putting the question, stated that there never was 10*l.* worth of materials sent upon the mine in any month that was not charged in that month.

A SHAREHOLDER asked if it were in the power of the meeting to dispose of the relinquished shares when the price for tin and copper improved?——Mr. MURCHISON replied in the negative, but stated that a meeting of the shareholders could at any time sub-divide the existing shares, those relinquished having merged into the company.——The CHAIRMAN asked if the quality of the ore maintained its value as the depth was increased?——Captain NICHOLLS said that the quality not only maintained its value, but that it improved in depth.

Mr. J. BERRY (who represented a shareholder) stated that as he was not present at the commencement of the meeting, he wished to know if the hope of success were grounded upon the contingent advance in the price of metals?——The CHAIRMAN said the facts appeared to be these—with ordinary prices the pre-

sent returns would leave a profit, but with present prices they did not meet the expenses. The mine, they were told by Capt. Nicholls, never looked better; the reserves of copper were quite equal to what they ever were, while the reserves of tin were never nearly so large. Even with the present low prices Mr. Wescomb had undertaken to continue the operations for three months, at a loss per share of 3s. or 4s.—certainly not more than 5s. The quality and quantity of the ore were improving, and a slight advance in the price would, of course, make a very considerable difference in their receipts.——Capt. Nicholls mentioned that the ore in the 90 was richer than at any previous level, and the produce during the last two or three weeks had materially improved. The end in the 70 had very much improved.——The motion that the report be received and entered on the minutes, and that the accounts be passed and allowed, was put and carried.——Upon the proposition of Mr. Hartridge, seconded by Mr. Barge, it was unanimously resolved that the operations at the mine be vigorously prosecuted. A call of 10s. per share was made. A vote of thanks to the Chairman was passed, which concluded the proceedings.

NEW CLIFFORD MINING COMPANY (LIMITED).

A general meeting of shareholders was held at the offices of the company, St. Michael's House, Cornhill, on Wednesday, June 27, Mr. James Weston in the chair.

Mr. Matthew Greene (the secretary) read the notices convening the meeting, and the minutes of the last were approved. The accounts showed a balance of assets over liabilities, as per balance-sheet, of 2311*l.* 13s. 3d. The agent's report was read as follows:—

June 26.—Since our last meeting a large amount of necessary work has been done. The following are some particulars of the machinery, &c., that has been erected at the surface:—In the first place, we have a substantial 50-in. cylinder pumping-engine and 10-ton boiler in capital working order, for which an engine-house, boiler-house, and coal-yard have been built; we have also fixed a 12-in. plunger-lift in the same shaft. The engine is calculated to drain the water quite 200 fms.; we have cut a plat 24 fms. from surface 12 ft. long, 10 ft. wide, and 9 ft. high, and we are now sinking below this level by six men and three boys, at 10*l.* per fm.; the shaft is altogether 31 fms. deep, and is in a beautiful white elvan course, which I consider to be of very great importance, and in which all mining authorities concur, as all our rich mines in this district, and, in fact, in most other mining localities, have been in, or in connection with, elvans of precisely the same character. I expect Gooley's lode to be intersected in about 5 or 6 fms. sinking, and have not the slightest doubt if not rich when intersected it will soon become so, as we have discovered in a cross-cut driven north from this shaft a lode underlying south, which underlie, if continued, will cause it to form a junction with Gooley's lode at about the 50, at which point we shall, doubtless, have a rich course of copper ore. From the engine at Holland's shaft to Weston's shaft, 70 fms. distant, we have fixed horizontal rods for pumping the water from the latter shaft, and have erected 10-in. pitwork, and all necessary appliances for sinking the same, which is now being done by six men and three boys, at 10*l.* per fm.; this shaft is 17 fms. 3 ft. deep; the lode is from 2 to 3 ft. wide, chiefly composed of gossan, green carbonate of copper, prian, spar, and also contains tin and black oxide of copper; considering the depth, the indications in this shaft are excellent, and all local mining authorities agree with me that we shall soon get in this shaft also a course of copper ore. We have three pares of tributers working on Gooley's and Weston's lodes for tin. In conclusion, I would suggest that our present operations be continued with vigour—the opening up of Gooley's and Weston's lodes to a greater depth and extent, which only needs a little time and perseverance, when I have no doubt the mine will prove equal to my previously-expressed opinion.—J. Michell.

The Chairman, in moving that the report and accounts be received and adopted, said the reports of the captain and directors are so complete, explicit, and exhaustive, that they leave little or nothing to say, except on one or two matters of minor importance. Had I not just returned from the mine, I should have only moved the adoption of the report and balance-sheet in a formal manner, but having so recently been on the sett, and through all the workings, I feel great pleasure of acquitting myself of a duty to you (the shareholders) in corroborating the statements set forward in the captain's report, of the very substantial manner in which the whole of the work done at the surface and in the mine has been executed; the engine-house, erected during the past winter, being so solid that it resisted the power of numerous heavy storms. It is stated by the oldest inhabitants that they cannot remember such a severe winter in Cornwall as last, and when the power of wind and rain was making wholesale destruction in the immediate neighbourhood, our buildings remained firm and unhurt. The engine was erected during the severest portion of the winter, notwithstanding it now works admirably, not only in pumping the water from out the engine-shaft, but works the flat-rods (which, by-the-bye, are round ones), and pumps the water out of Weston's shaft. The specimens upon the table before you are from Weston's shaft, and if you compare the one brought up last with the one we had at the point before the engine went to work, you will perceive a marked improvement, and every fathom sunk the character of the lode improves. The lode is rich for tin now, but we are daily in expectation of meeting with a course of copper ore. While in the neighbourhood I met with a considerable number of really practical mining captains, and strange as it may seem, none with a dissenting voice—they one and all agreed that we have one of the finest setts in the locality, and one of the likeliest spots for a good mine. These statements to me were very satisfactory. I may add that we have upon the property all the necessary machinery, the pitwork all fixed, the engine and everything working first-rate, all the hands employed that can be with advantage; and all that remains is to put into practice the old sentiment, "There's a good time coming, boys, only wait a little longer." I have much pleasure in moving the adoption of the report and accounts.

Mr. Joshua Perkins said he was fully able to corroborate all the Chairman had said; he personally held a large interest, and had visited the mine several times during the last twelvemonths, and had made it a matter of business to inspect the works and machinery at the mine, and also to glean all the information and opinions he could concerning the value of the property, and found it was universally looked upon as the best piece of copper ground in the Gwennap district.

The retiring directors were unanimously re-elected. Mr. Thomas Thompson was re-appointed auditor. A vote of thanks to the Chairman and directors, also to the secretary and agent, terminated the proceedings.

COLONIAL BANK.

The ordinary half-yearly court of proprietors was held yesterday, at the London Tavern,—Mr. C. Marryat in the chair.

Mr. Calvert (the secretary) read the notice convening the meeting. The report of the directors was read, as follows:—

The directors submit to the proprietors, in pursuance of the provisions of the Charter, the following statement of the debts and assets of the corporation on Dec. 31, 1865, which also comprises the nett profit of the half-year ending at that period.

DEBTS.				
Circulation	£	272,197	10	0
Deposits, bills payable, and other liabilities		1,907,071	11	3
Paid-up capital		500,000	0	0
Reserved fund		134,000	0	0
Balance of profit from last half-year		1,669	13	5
Nett profit for the half-year		39,662	9	10 = £2,854,601 4 6

ASSETS.				
Specie	£	270,290	7	1
Due to the bank in the colonies on bills discounted and purchased (including those past due), &c.		1,600,740	12	5
Due to the bank in the colonies on current accounts		21,523	3	4
Due to the bank in London on bills remitted, cash at bankers, &c.		953,080	15	4
Bank premises and furniture in London and in the colonies		8,966	6	4 = £2,854,601 4 6

The directors have much satisfaction in being able to report that the bank has been but slightly affected by the recent severe monetary crisis, and that, for any losses which may arise in consequence ample provision has been made. They have further to report that at the latest dates from the branches the business was proceeding favourably; but they regret to state that the prices of colonial produce in the markets of this country are greatly depressed. Three years having elapsed since a gratuity was awarded to the officers and clerks of the establishment, the directors have again presented them with 10 per cent. upon their salaries, not doubting it will be approved of by the directors.

Deducting this gratuity, which amounts to 2890*l.* 10s. from the nett profit declared above, there will remain	£36,861	19 10
And adding the balance brought forward from last half-year of	1,669	13 5
Gives for division	£38,531	13 3
Out of which the directors recommend that an ordinary dividend of 6 per cent., and an extraordinary dividend of 1 per cent. upon the paid-up capital of the corporation be made for the half-year ending Dec. 31, 1865, which will together require	35,000	0 0
Leaving	£ 3,531	13 3
From this the directors propose to carry to the reserve fund	2,000	0 0
Increasing it to 136,000*l.* and the balance of forward to next half-year.	£ 1,531	13 3

The Chairman, in moving that the report be received and adopted, paid a graceful tribute to the memory of the late Sir Minto Farquhar, M.P., one of the directors, stating that the vacancy had not yet been filled up, owing to there not having been sufficient time to give the required notice. He need not detain the meeting further than to remark that the dividend now recommended was not equal to that of last year—that, however, was an exceptional dividend, the profits now realised being about the same as those of the corresponding half of the preceding year, and the present dividend was of the same amount as was declared upon that occasion. The shareholders were aware that the profits were divided into a normal and a bonus dividend, which was an intimation that the latter would occasionally fluctuate. Seeing, however, the monetary crisis they had gone through, and the low prices of produce, he thought they had good reason to congratulate themselves upon being able to issue such a report as that just submitted. (Hear, hear.)—Mr. Gurney Hoare seconded the motion for the adoption of the report.

A Shareholder enquired if any portion of the profits was applied towards the reduction of the amount paid for the Bank of Jamaica?—Mr. Gurney Hoare replied that out of the half-year's earnings the sum of 2560*l.* had been set aside for that purpose, and that there were yet two similar instalments to be paid.—The motion adopting the report was put and carried unanimously.

A resolution was then carried to the effect that an ordinary dividend of 6 per cent., and a extraordinary dividend of 1 per cent. (free of income tax) be declared for the half-year ending Dec. 31.

Mr. C. McGarel said that, having been one of the founders of the bank, he knew full well the arduous duties that devolved upon the board of directors, and for which they were very inadequately remunerated—indeed, had the amount of dividend been equal to that of last year he should have proposed an increase of the directors' remuneration—(hear, hear)—but that he would defer till another occasion. The whole of the shareholders had great reason to be thoroughly satisfied with the manner in which they continued to conduct the affairs of this bank—in fact, during times like those just passed through it was perfectly marvellous how they had escaped with such a little loss. He hoped and trusted that at the next meeting they would be equally fortunate, and that better profits would be realised. He had much pleasure in proposing that the best thanks of the shareholders be given to the directors. (Hear, hear.)

Mr. J. Alexander Hankey, also one of the founders of the bank, had much pleasure in seconding the proposition. There had recently been most striking instances of the difficulties attending the conduct of banks in this country, and it could hardly be imagined that it was in any respect easier to manage a bank, the localities of which were spread through a number of the colonies. He need hardly say that it required the utmost care and anxiety on the part of the directors to avoid losses so successfully as they had done. (Hear, hear.)

The motion was put and carried unanimously.

The Chairman having acknowledged the vote on behalf of his colleagues and himself, said it was most gratifying to them to receive such testimony from their old friends, who, from having been behind the scenes, knew how the business was conducted.—The meeting then separated.

FOREIGN MINING AND METALLURGY.

Fears are still entertained that Belgian metallurgical establishments will have to pass through a period of considerable difficulty, in consequence of the political and financial complications which abound on all hands. The result of a recent adjudication in Holland is not considered very encouraging. Seraing obtained on somewhat stringent conditions a contract for rails at 7*l.* 1s. 2d.; these rails are to be delivered at Dordrecht, the terms of reception and guarantee remaining the same as in other Dutch adjudications. It is contended that in ordinary times no establishment would have tendered below 8*l.* per ton as the extreme limit. The Couillet Works have obtained at Rochefort a lot of 28 tons of plates, at 12*l.* 1s. 2d. per ton; the Châtillon and Commentry Forges Company tendered at 12*l.* 2s. 10d. per ton. On all sides conditions of production appear to have a tendency to become more uniform, and unrestricted competition becomes every day more effective. The season of 1865-6 has closed without the Belgian collieries having been at all seriously affected by it. The period of suspended navigations is a time of check, during which the situation will present only a secondary interest. It is expected that quotations will be maintained, but it is also anticipated that those workings which can without difficulty slacken their extraction will not hesitate to do so. The Sclessin Blast-Furnaces, Ironworks, and Collieries Company commenced the payment on Monday of a first dividend of 5 per cent, in respect to the exercise 1865-6. The John Cockerill Company held its meeting on Monday, at Liége. The meeting of the Montigny-sur-Sambre Blast-Furnaces and Rolling-Mills Company will be held, July 20, at Brussels.

Some French groups in which the production is important, and the business relations of which extend to foreign countries, begin to feel the effects of the political and financial crisis. In the Moselle the sales of minerals for Belgium have become much reduced, and prices have fallen to 3s. 1d. and 3s. 2d. per ton. Pig has also fallen. In the Haute-Marne only a few contracts are noted; charcoal-made pig is now worth 4*l.* 2s. to 4*l.* 2s. 6d. per ton. Ordinary rolled iron has made 8*l.* 12s. to 8*l.* 16s. per ton. In the Moselle and the Ardennes the price of rolled iron, coke-made, has been brought down to 8*l.* 8s. per ton. It is announced that the principal furnaces of the Meurthe district—Champigneulle, Chavigny, Frouard, Jarville, Heming, Yoerdun, Maxéville, and Pont-à-Mousson—numbering altogether nine furnaces building, or in course of construction, are about to form themselves into a syndicate for the sale of their products. The Carmaux Mines Campany commenced the payment on Monday of the half-yearly interest accruing on its obligations. The Girardville (United States) Collieries Company held a meeting at Paris on Thursday. The Denain and Anzin Blast-Furnaces Company will meet on Tuesday at Paris. The Graissessac Coal Mines (Western Basin) Company will meet, July 12, at Paris. The Meurchin Coal Mining Company will meet, July 28, at Béthune. The Caisse des Mines, July 30, at Paris. The Longterne-Ferrand Colliery Company, Aug. 6, at Elouges.

The position of the foreign metal markets becomes more and more difficult week by week, from the influence of political events and the financial crisis. The producing centres of Germany have especially been rudely affected; a great number of zinc works in Silesia are inactive, or have considerably restricted their production; this must be one of the principal causes of a marked advance which has taken place during the last few days. The copper markets remain depressed; the moment is unfavourable to a revival of activity, and those who hoped soon to witness it must now abandon the expectation; so much hesitation prevails that any great affair becomes well nigh impossible. In Chilian in bars, at Havre, there has been little business; prices have been feeble, and a lot of 25 tons, deliverable from Aug. 15 to Aug. 31, has been dealt in at 82*l.*, while another lot has changed hands at 81*l.*, Paris conditions. Copper has been feeble at Paris; the low prices have, it appears, provoked some purchases; English has made 85*l.*, and rough Chilian 82*l.* per ton. At Rotterdam, Drontheim has made 66 fls.; North American, 63 fls.; and English, 63 fls. At Havre, Peruvian mineral (pure standard) has made 84*l.*; United States (Baltimore), 94*l.* to 96*l.*; ditto, Lake Superior, 100*l.* to 114*l.*; Mexican and Plata, in bars, 74*l.* to 78*l.*; Russian, 94*l.* to 96*l.*; old yellow copper, 54*l.* 12s.; red, ditto, 81*l.*; bronze, 72*l.* to 76*l.* There is nothing of a very striking character to note with regard to tin. At Rotterdam, Banca has made 45½ fls.; Billiton, 45½ fls.; and English, 45¾ fls. At Amsterdam the quotation for Banca has been 45 fls. At Paris, Banca has made 84*l.*; Detroit, 82*l.*; and English, 82*l.* per ton. At Antwerp, Banca has brought 52 fls. At Havre, Banca has realised 83*l.*; Detroit, 80*l.* 10s. to 81*l.*; and Peruvian, 64*l.* to 76*l.* per ton. At Hamburg tin has been a little firmer; Berlin has been quiet, but some transactions have been effected. At Hamburg lead has been held better, in consequence of the limited stock. On the Berlin market lead has been in good demand; at the same time, the business done has not been very important. The Paris market has been in animate, and prices have remained without change. At Rotterdam, Stolberg has made 11¾ fls., and German, 11⅝ fls. At Amsterdam soft lead has realised 12 fls., and Stolberg has commanded the same rates. At Paris, Spanish saumons have made 20*l.* 16s., and French ditto 20*l.* 8s. per ton. At Havre, Spanish lead has realised 20*l.* to 20*l.* 2s., and lead from other sources 20*l.* per ton. At Hamburg the price of zinc has hardened considerably, without, however, any great affairs being concluded. The Breslau zinc market has also become firmer, and numerous affairs have taken place. On the Berlin market the article has been in better demand. As regards the Paris market, a serious revival is noted in the tone of business; rough Silesian has risen to 22*l.* per ton. At Amsterdam, Silesian has realised 13 fls. At Havre zinc has made 21*l.* 4s. to 21*l.* 8s. per ton.

The Spanish Credit Mobilier has just held its annual meeting. The report, which presented the Credit in a far from brilliant light, observes with respect to the coal mines associated with the undertaking:—"We have not to indicate any notable differences in the figures referring to the production and sale of our coal. More than any other occupation, perhaps, coal mining is dependent on the commercial situation; it is upon it especially that the state of commercial affairs exerts a direct and sensible influence. We might be astonished at having nearly maintained during the past exercise the results of the preceding year, did we not know that the steps of industrial progress, even when it appears the most gravely compromised by general circumstances, remain acquired, and constitute fresh starting points. It is with confidence that we rely on progress more or less rapid, but always certain, and we are preparing ourselves accordingly by works of all kinds, which we are continuing with perseverance and economy, and which will enable us to provide for the wants which may successively arise. An interesting symptom of the progress of coal mining industry is, on the one hand, that our coal plays a more and more considerable part in the consumption of the gas works of the Peninsula; while, on the other hand, the tendency of populations to adopt this mode of heating becomes every day more marked." The directors of the Madrid, Saragossa, and Alicante Railway have just presented a very gloomy report as to that concern. The directors, however, express hopes that some improvement will be witnessed on the completion of lines which will unite the network to systems already worked in Andalusia and Portugal, as well as to the Belmez coal mines.

The Franco-Austrian Railway Company, as we have shown on some former occasions, is proprietor of some mines and metallic works. In the centre of Dognaeska the expenditure made last year on some works in connection with a mechanical preparation establishment amounted to 42*l.* At Szaszka the extension of the Muhithal gallery was proceeded with at two points. A distance of about 170 ft. remained to be pierced at the close of 1865, but this work has been completed this year; the expenditure made in 1865 amounted to 488*l.* At Reschicza the completion of plans for a foundry, some supplementary works in the Francis-Joseph gallery, and the construction of some tramways required for the internal service of the works, gave rise to an expenditure last year of 873*l.* The rapid extension which the fabrication of Bessemer steel has taken in Austria, and the consumption of that product induced the directors not to postpone the introduction into the Reschicza Works of a metallurgical process, for which the minerals of the Banat are considered to be peculiarly adapted. The experiments, &c., which have been made with this object cost the company last year 430*l.* The causes which in 1864 diminished the revenue of the company's mines, ironworks, and estates continued to make their influence felt in 1865. To a persistent metallurgical crisis must also be added the influence of a falling-off of industrial affairs in Bohemia, which occasioned a notable reduction in the sale of the products of the company's collieries in that direction. The production of the company's coal in the Banat and in Bohemia attained last year a total of 352,234 tons, or 19,879 tons less than the corresponding total for 1864. The collieries of Brandeisl and Kladno experienced a diminution in their sales of 22,713 tons. Some accidents connected with the working having contributed to an increase in the return price, while at the same time the average sale price declined the nett profit realised by the mine experienced a sensible diminution. These unfortunate results were partially compensated for by the working of the Steyerdorf Collieries, with regard to which efforts have been made to obtain an extension of outlets in Hungary, as well as on the side of the Danubian Principalities and the Black Sea; the return price was diminished last year, while the production was increased to the extent of 8134 tons. The field of working of the Michael pit, at Brandeisl, being almost exhausted, the extraction has been completely stopped, after the removal of the piles of coal prepared for breaking up. The concentration of all the production at Kladno, where there are three pits now in working, has appeared preferable to the opening of a new field of operations at Brandeisl. On the one hand, the more favourable conditions in respect to the power and quality of the coal assure a more profitable working at Kladno; while, on the other hand, the boilers and powerful machines requiring to be moved from Brandeisl could be carried there without involving too considerable a sacrifice.

The mechanical and contracting company, known as Parent, Schaken, and Co., formed Dec. 31, 1860, expired May 1, 1863, but it was prorogued by acts of Feb. 26, March 15, and April 17, 1863, to May 1, 1866. Time gliding on continually, we have passed the last-mentioned date, and M. Parent having recently died, and the work of railway construction now presenting itself under a far from brilliant aspect, so far as the Continent is concerned, the company is to be wound-up, M. Pierre Schaken being appointed sole liquidator. A new concern has been developed under the title of the Société Métallurgique de l'Ariége à Responsibilité Limitée. The proposed capital is 20,000*l.*, and the object is the working of furnaces, forges, and steel-works in the Ariége, near Sainte-Marie. The French Steam Navigation on Canals Company is to be wound-up. An additional concession of coal bearings, under an extent of 296 acres, has been made in favour of the St. Vaast Coal Mining Company. Another decree grants a similar concession, referring to an extent of 62 acres, to the Peronne Coal Mining Company. Both these companies—St. Vaast and Peronne—are Belgian enterprises. The Société de la Nouvelle Montagne will commence the payment to-day (Saturday), under discount, of a dividend of 2*l.* per share, maturing Dec. 20, 1866. The La Haye Collieries Company paid on Monday a first dividend for the exercise 1855-6, of 1*l.* per share. The Royal Asturian Mining Company paid, on July 2, a dividend of 1*l.* per share, in respect to the exercise 1865. The Pontgibaud Mines Company commenced on Monday a distribution (on account) of 8s. per share in respect to the exercise 1865-6.

ON THE HEMATITE MINES OF THE ULVERSTONE DISTRICT.

BY G. C. GREENWELL, F.G.S.

The remarkably rich deposit of hematite iron ore in the Ulverstone district of North Lancashire is now being, and has for the last few years been, largely drawn from, and its products, notwithstanding the cost of carriage, are conveyed very long distances to mix with those ores which, though found in great abundance near the site of the blast-furnaces, have not in themselves that quality which, if not improved, would produce iron of first-class character. The iron ore of the Ulverstone district has been worked for a great number of years, having been for upwards of 100 years worked at Lindale Moor. The following abstract from the Mineral Statistics, by Mr. Hunt, shows the quantity of ore annually produced in this district since the year 1853:—

1854	336,173	1858	438,156	1862	559,391
1855	336,828	1859	445,046	1863	658,642
1856	464,853	1860	520,829	1864	691,421
1857	592,390	1861	519,180		

By the above it will be observed that the quantity has more than doubled in the above period. The ore is found to exist in various ways—sometimes it appears to be a regular stratification, with a roof and floor of limestone of the carboniferous period, sometimes it appears to exist in the form of a vein, and sometimes it occurs as filling pockets or sops. These are generally found in the limestone, but sometimes between the limestone and the clay-slate, the Old Red Sandstone being here wanting, and the clay-slate being a portion of the Upper Silurian, as shown on the geological map published by Prof. Ramsay.

The ore rarely, if ever, crops out to the surface; it, with the accompanying strata, is covered by an alluvial deposit, consisting of gravel, clay, and sand, of variable thickness; in some instances, as at Askam-in-Furness, the thickness of this deposit being 43 yards, the upper portion being clay, and the lower 4 or 5 yards being sand. Under the sand, immediately above the ore, is a mixture, varying in thickness from *nil* to 3 ft. of dirt, stones, sand, and ore, locally known by the name of "pindle." Between the "pindle" and the ore there is no exact parting. There appear to be several of these strata and veins traversing the Furness districts; one very extensive stratum, or bed, is extensively worked at Hod-Barrow, and at Askam-in-Furness. The direction of its outcrop into the alluvial deposits is north 45 west by the compass, and both the roof and the floor of the ore, which are limestone, dip at Askam, to the south-west, at an angle of about 25°. The length of a drift across the bed, from the top of the limestone underlying, to the bottom of the limestone overlying the ore is 45 yards, indicating the vertical depth of the bed, if regular, at 22½ yards. The ore *in situ* consists of a hard, compact, agglomerated mass in some places, as at Askam, requiring the use of gunpowder in mining it; in other places, however, it is soft and friable. Even where hard, however, exposure at the surface soon disintegrates the mass. The following analyses of the ore of the Ulverstone district are extracted from the Memoirs of the Geological Survey:—

1.—Gilbrow Ore, Ulvertone (A. Dick). Description:—Red hematite, unctuous, easily scratched by the file; lustre, sub-metallic; colour, purplish-red; streak, bright red; fracture, uneven, and minutely crystalline; pieces of carbonate of lime and other minerals occur in it, which, getting coloured by the powder, cannot be seen until the specimen is washed.

Peroxide of iron	86·50	Carbonic acid	2·96
Protoxide of manganese	0·21	Phosphoric acid	Trace.
Lime	2·77	Sulphuric acid	0·11
Magnesia	1·46	Insoluble residue	6·55=100·56

Insoluble Residue.—Silica, 6·18; alumina, with trace of iron, 0·30=6·48; iron, total amount, 60·55.

2.—Lindale Moor, near Ulverstone (J. Spiller).—The sample was selected from a large quantity of the ore, consisting of fragments, of various degrees of hardness, the majority of which were of the hard compact variety, deep greyish purple in colour, and covered with a brownish-red unctuous powder; there were, also, small quantities of fibrous hematite and specular iron, together with quartz and a little earthy matter.

Peroxide of iron	94·23	Sulphur acid	0·09
Protoxide of manganese	0·23	Bisulphide of iron	0·08
Alumina	0·51	Water, hygroscopic	0·39
Lime	0·05	Water combined	0·17
Magnesia	Trace.	Insoluble residue	5·18=100·88
Phosphoric acid	Minute trace.		

Insoluble Residue.—Silica, 4·90; alumina, 0·12; peroxide of iron, traces; lime, traces=5·02; iron, total amount, 65·98.

The Mode of Mining this ore is as follows:—Small shafts, supported by square timbering, are sunk through the alluvium, and usually upon the outcrop under it, of the ore, to a depth of 9 or 10 ft. below the "pindle." Then drifts or levels are driven about 9 ft. high, and 9 or 10 ft. in width, the superincumbent mass being supported by very strong and closely set timbering, until as much of the ore as is practicable is extracted at that depth, when the timbering gives way, and the surface settles down. The shafts are then further sunk, and the ore extracted in the same manner, and the downward process is continued as far as the same is practicable. The result of this mode of working is the formation of immense and very deep settlements of the surface, some upwards of 100 ft. in depth. These settlements become receptacles for water, which, during the continuation of the mine in work under them, require to be kept drained by engine-power. As some of the mines are not very far distant from the sea, and not more than 50 feet above high water-mark, it may be a question some day as to how far this system of working may be safely practicable.

The exact position and nature of these magnificent deposits are as yet matter of some doubt. There are in various parts of the country deposits of hematite iron ore; but I am not aware that there are any others (excepting those of the Cleator district) which are similar to those of the Ulverstone district. A comparison of the deposits of Ulverstone with those of the Forest of Dean would be very interesting, both being found in the mountain limestone, and should there be found to be any identity between them, so as to lead to the discovery of their continuity at Ulverstone, as in the Forest of Dean, any doubt as to the exhaustibility of this ore would be finally set at rest. Should this discovery be made, hematite iron ore will be found to exist in the entire mantle of limestone surrounding the great lake district, and which, commencing at Cleator, passes by Ireby, Hesket-Newmarket, near Kirkby-Stephen, Kirkby-Lonsdale, and Cartmel, to the site of the deposit which I have endeavoured to describe.

Mr. Andrew Knowles proposed that the thanks of the society be given to Mr. Greenwell for his communication, which was unanimously assented to.

Mr. Hull, in the discussion which ensued, enquired if Mr. Greenwell had observed any instances in which the upper surface of the hematite was covered with millstone grit?——Mr. Greenwell replied that he had not.

Mr. Hull, in continuation, said he was informed that it was so in some places. It was so far interesting that the comparison Mr. Greenwell was attempting, between the hematite in the Ulverstone district and the Forest of Dean would be borne out in that respect. He thought in the Forest of Dean there two beds of hematite, one on the top of the limestone, and another in the millstone grit. And there they were perfectly continuous all round the basin, though sometimes only represented by a thread; but the beds correspond with the dip of the strata, and seemed to be extremely regular. He did not think they were so regular in the Ulverstone district, where, it seemed, there was more than one deposit; in one place it was covered with mountain limestone, as well as resting on mountain limestone; in other places it was covered by millstone grit. It was a question, however, which wanted to be worked out in great detail. He was pleased to have heard Mr. Greenwell's paper; any information on the subject was extremely acceptable.

The President remarked that the late Mr. W. Peace, F.G.S., read before the society a paper on the Iron Ores of Furness, and he himself, some 25 years ago, wrote a paper on the origin of these ironstones, and he gave his views upon them then. He went to look at the district, and he found the iron lying in holes in the limestone. In some places, as at Cross Gates, they were about being bared, and he saw them opening the iron ore. It seemed to go right up into the till there. The great deposit of Lindale Moor, which had been worked, he believed, for centuries, was really a valley excavated out of the limestone, and then filled with iron ore. As to the age of the ore, his own opinion was that it was since the deposition of the limestone, and before the formation of the Permian rocks above it. The holes might have been formed either by swallows—that is, by rock waters charged with carbonic acid, or washed out by the sea. Some years since, Mr. Bolton, a gentleman living near Ulverstone, who had paid considerable attention to this subject, showed him a very remarkable fossil, which seemed to mark the age of these beds of hematite iron ore, and which caused him to believe that they were all formed during the deposition of our coal measures. His reason for dating the age at which these beds occurred arose from the fossil which Mr. Bolton showed him—a good Sigillaria vascularis, displaying good internal structure and external characters, all of which had been converted into peroxide of iron. Every portion was preserved in this peroxide of iron. No doubt that plant grew during the carboniferous epoch, and was afterwards converted into peroxide of iron. The origin of iron ores was now generally attributed to volcanoes. Some years ago a rich bed of hematite ore was found in the neighbourhood of Mount Vesuvius. It came out of the volcano as a chloride of iron, and was immediately converted into a peroxide of iron. The generally received opinion now was that erosions had been made in the limestone during the carboniferous epoch, and afterwards filled with iron before the Permian sandstone had been deposited over it.—After a few further observations, the meeting terminated with a vote of thanks to the President.—*Trans.* "*Manchester Geological Society.*"

Coke Ovens.—An invention has been provisionally specified by Messrs. William Morgan, of Brendon Hills, Somerset, which consists, first, in constructing coke ovens with movable bottoms; he either hinges the bottom to the oven, or he makes the lower part and bottom of the oven capable of being separated from the upper part, and mounts the lower part and bottom upon wheels. When the coking is completed the charge of coke may be wheeled away, and readily removed, or he fixes the ovens so that they may be tilted to allow of the charge issuing from the ordinary doors. Secondly, in constructing the

floors of coke ovens inclined with one or more feed apertures at the top, and with one or more doors for the discharge at the bottom of the incline. These incline floor ovens may be in single rows, or they may be arranged back to back, with flues running between and under the floors, as well as on all sides of each oven, or the ovens may be set radially. Third, in fitting ovens with trunnions, to permit of their being turned to render the coking more uniform, or instead of trunnions, in fitting them upon wheels, or upon bearings, which allow of the ovens being revolved. Mr. Morgan, who claims as his invention the running of coke before cooling directly from the ovens into closed boxes or reservors, to keep it from contract with the atmosphere until cold, and the introducing of jets of water or steam to remove sulphur and impurities from the coke. The boxes are provided with suitable inlet and outlet apertures and doors.

TRUTH'S ECHOES, OR SAYINGS AND DOINGS IN MINING.

The Mining Share Market has not been so active this week as anticipated from the improvement observed last week. Still, from the enquiries which are being made for dividend as well as progressive mines, there is no reason to apprehend a greater decline than has taken place, and a moderate amount of business appears to have been transacted. There still exists a strong tendency towards improvement in the tin market, and prices continue firm. The copper market has been stationary, and no improvement in the standard.

In foreign shares a decline has taken place in Chontales, Frontino and Bolivia, and St. John del Rey, whilst others remain dormant.

WHEAL SETON shares have changed hands, but prices have fluctuated. WEST SETONS continue inactive, at lower prices. CLIFFORDS have receded, and more freely offered. EAST BASSETS are dull, and prices stationary. WEST CHIVERTONS have been in fair request, and remain firm at present quotations. CHIVERTONS are quiet, without any change in price. CHIVERTON MOORS have been freely dealt in, but prices have varied. SOUTH FRANCES have been in request at higher rates. CAMBORNE VEANS have declined, and more freely offered. TINCROFT continues inactive, at present quotations. GREAT LAXEYS have receded, but enquired for at buyers' figures. GREAT NORTH LAXEYS are apparently firm, at quoted prices. FRANK MILLS are in request, at buyers' prices. SOUTH DARREN and CENTRAL MINERA have been less active this week. CENTRAL SNAILBEACH shares are in request, at fair market figures. EAST GRENVILLE shares have been rather largely dealt in, and left off slightly weaker. WHEAL GRENVILLES have been enquired for, at former quotations. NORTH TRESKERBYS have not been very active, and prices remain stationary. GREAT BUSYS are very quiet, and the same may be stated of HALLENBEAGLE and GREAT NORTH DOWNS.

GREAT WHEAL VORS have advanced and a fair amount of business done. EAST LOVELLS have been rather quiet, but maintain their present prices. ST. IVES CONSOLS and MARGARETS have been enquired for at buyers' prices. ROSEWARNE UNITEDS are more than ordinarily quiet, with sellers at lower rates. EAST CARADONS have improved upon last week's quotation, and a good enquiry set in, from the improved prospects of the mine. MARKE VALLEYS were done at lower rates during the early part of the week, but left off firmer.

WEST CARADON and WHEAL TRELAWNY have been more than ordinarily dull. DRAKE WALLS have been sought for at buyers' prices. PRINCE OF WALES have been largely dealt in, and prices advanced, arising from speculative operations on the market, for no change has taken place in the mine, nor possibly can, until the engine is erected, and underground workings resumed, which will occupy a few weeks longer; still the lode holds out much promise. CREBORS have been remarkably quiet.

EAST CARADON.—There have been improvements in the 70 east, on the new lode, and the 90 east, on the south lode, whilst other ends have decreased in value during the past week. At the same time, the aggregate value of the several ends is better. The 100 east, on the caunter, has not improved, but may on further developement. PHŒNIX MINE is represented to be yielding more tin than hitherto, although not sufficient to meet costs; still it is gratifying to see tin following so close upon the falling-off of the copper, and it is to be hoped the mine will again take its place among the dividend mines of the locality. A rumour prevailed last week that the pay-day had been put off, but I learn that it was only to the following day, arising from an unavoidable circumstance.

OKEL TOR.—The communication of the 65 with the 80 will not only give good ventilation to the bottom level, but enable them to develope that portion of the sett with greater facility, as well as open up some good orey ground. The stopes in the back of the 65 continue of a very productive character, the lode being large, and yielding large quantities of copper ore. The stopes in the back of the 65 produce in the aggregate 18 tons per fathom, whilst the 35 and 50 are in good courses of ore. GAWTON MINE, which is traversed by the same lode as Okel Tor, is looking very promising. The back of the 40 is worth fully 3 tons per fathom, and the 50 fm. level end west is yielding 5 tons per fm. The 50 east and west are looking very well, and the stope is equal to 4 tons.

EAST JANE.—No change has taken place here, excepting in the 48 south, on the western lode, which is large, and daily improving in character. Other points south are looking very promising. CUDDRA continues to look well, and is opening up some valuable runs of tin ground in the deeper levels. The lodes are of more than ordinary size, and carrying tin throughout. The 117 west, for the portion carried, is worth from 35*l.* to 40*l.* per fm., and other places are looking equally good. MAUDLIN: It is reported that a very considerable change has taken place in the appearance and character of the lode in the 80, east and west, leaving little doubt of their approaching a course of ore. SILVER VEIN: The prospects here are encouraging, and the shaft, which is now down upwards of 14 fms. below the 50, is in more favourable ground, and the lode is found to carry more silver, and improving in value every fathom sunk. The other places are without change.

ROYALTON TIN MINE.—The prospects here are of the most encouraging character, the main lode being extraordinarily large, fully 72 ft. wide, carrying tin throughout, which has been developed by shafts and open cutting for a considerable distance, showing that the tinstuff is almost inexhaustible. The engine-shaft is down 25 fms., and being sunk in the country, they are driving to cut the lode, which is daily expected to be intersected, when tinstuff can be raised at a low cost, sufficient to keep the 24 heads of stamps constantly going. There appears to be no lack of work, and, from the fact that a powerful engine of 38-in. cylinder is in full work, with every other requisite, including dressing-floors, &c., necessary for regular and permanent returns of tin; and, as a parcel of tin will be sold in a few days, it is expected from present appearances the sales will be systematic, profitable, and increasing.

EAST WHEAL LOVELL.—The north lode, in the new shaft, sinking below the 45, is worth from 35*l.* to 40*l.* per fathom; and the stopes in the back are worth together from 50*l.* to 55*l.* per fathom. There is a good lode in the winze sinking below the 40, on the south lode, worth full 40*l.* per fathom, and a stope in the back of the same level west is valued at 20*l.* per fm. There are several places looking well for early improvement. GREAT WHEAL FORTUNE continues to look remarkably well in the 116, where there is a rich course of tin gone down, and they are driving the 126 rapidly, with a view to get under it, and prove the extent and value of the discovery. JAMES LANE.

From Mr. EDWARD COOKE:—There has been a little move in the market for a few mines, among which are West Chiverton, Prince of Wales, East Caradon, and Great Wheal Vor. For these mines there has been a good demand, with an upward tendency. Altogether there is a better feeling with regard to the future, and if an active demand springs up for mining shares there will be a great rise. I would, therefore, suggest that a selection of a few good mines be now made, while prices are very low. In ordinary times the shares in TRESAVEAN MINE would be 10*l.* to 15*l.* per share, and the prospects of the mine fully ustify the former price, which would be only about 5000*l.* for the entirety of the mine, which is situate in one of the most productive mineral districts that Cornwall has ever produced, and it is by no means improbable that an equally productive and profitable mine to that of the old Tresavean will be opened up in the present working. The mine is already almost self-sustaining, as no call has been made for many months, nor has any been required. The shares, at 5*l.* to 6*l.*, or 2000*l.* to 3000*l.* for the whole mine, are ridiculously low, and offer a margin for a very great rise in price. It is for this reason that I advise the shares being bought. CLIFFORD shares are also very low, and upon a reaction in the standard they will have a rise in price. EAST CARADON MINE continues to improve, which has caused a demand for the shares. FRONTINO AND BOLIVIA shares have receded, although the advices by the last mail were of a very encouraging character, and the future of this property may be deemed much more cheering than the past has been. The price having now receded to about 10s., 12s., there really is a fair chance for those who buy the shares to be enabled to realise large profits in a few weeks.

CHONTALES shares have been dealt in to a fair extent, but there has been a slight reaction in price, which should be taken advantage of to buy the shares at every opportunity. Notwithstanding all that may be written, anonymously or otherwise, about combinations to keep the shares to a premium, I do not believe that such combination does or ever did exist but in the minds of anonymous correspondents and their compeers. I regret that I can see no other motive for such gratuitous remarks but a desire to induce the real shareholders to part with their shares, in order to place the accounts of certain parties straight. No doubt a similar view is taken by the shareholders themselves, who treat with indifference all the insinuations that have been made against their property. Of course, all the insinuations that have been made are entirely conjectural. The report of the late Capt. Francis on the value of the property tended to satisfy the directors that the mines were rich almost beyond what they had hitherto conceived, and in a few weeks there will be a report from an agent who is entirely independent of the Chontales Company. Upon that agent's report, from all I know and have heard of his character, I would not hesitate to place the greatest reliance, and he enjoys the utmost confidence of very influential parties. From what I know, also, of Capt. Paul, and his advice to his most intimate friends and relatives in respect to the Chontales Mines, I entertain most implicit confidence that Chontales will convince the sceptics in the profitable working of gold mines that they have hitherto formed very erroneous notions, about these mines in particular. The profits will, no doubt, be very large, and probably far exceed what Capt. Paul has estimated them at.

From Mr. J. B. REYNOLDS:—We are now surely emerging from a period of panic and gloom, the like of which has never been witnessed before. During this "period" I have "accepted the situation," and refrained from troubling you with any communications. Taking into consideration the aspect of political and domestic matters, the prospect before us is one which should be considered with feelings of intense gratitude and joy. It is only reasonable to assume that when the war on the continent of Europe has quite stopped the metal trade will revive as quickly, at all events, as it has declined. With this revival the hopeful and genial spirit of the mining investor will return, and it may be that Cornwall, with the other mining districts, will be gladdened again by prosperity such as we had never known before. Many during the late panic have forsaken their colours and decried mining as an investment, but I have, I hope, consistently adhered to my conviction that, as an investment, it is unrivalled, and as a speculation nothing is more praiseworthy or safe. I take it for granted that the management of the properties selected is good, and that the shares are bought at a reasonable rate, according to the opinions of those best qualified to judge. The principal feature in the market for mining shares may well be stated as being the real absence of sellers to any extent of *bona fide* stock, unless at prices considerably beyond published quotations. It is also noteworthy that many mines not before the public at all, and the shares in which can only be obtained by private negociation, are really safer, and have more real merit, than some others the praises of which are so frequently sounded forth through the press. I have only to mention many of the properties under the management of Messrs. Taylor and Sons, &c., to bear out the truthfulness of the statement. It will be my duty to acquaint myself with the merits of many mines the shares in which are very well held, but concerning which, in reply to enquiries, the answer is generally sent, "not known on our market," meaning, of course, the London market. If I am satisfied at the result of such enquiries, a market of a strictly private nature will be found through me. I invite the co-operation of all who approve my intentions. Concerning Devon Great Consols, Cuddra, West Sharp Tor, Dale Mining Company (Limited), Bryn Gwiog, Minera; Gothic Silver Lead Mining Company (Limited), 10 per cent. guaranteed; South Callington, and all the market mines, I am ready with information.—N.B. It is right (and I am glad to perform the duty) that I should state a considerable improvement has taken place in WEST WHEAL KITTY, and that they have a lode which can be worked at a profit of 25*l.* per fm. for tin; a fine discovery. Shares in certain quarters are changing hands. A great rise expected.

MINING, MINERALS, AND METALS—PATENT MATTERS.

By M. HENRY, Memb. Soc. Arts, Assoc. Soc. Eng.

Applications for Patents relating to Mining, Minerals, and Metals have not been very numerous during the last fortnight; the following, however, appear in the recent Government lists:—

June 19, LUCAS, Paris, for the manufacture of screw nuts and bolts, No. 1644; and BENTALL, Heybridge, for rolling-bars for the manufacture of nuts, No. 1648.—June 20, TONGUE, Southampton-buildings, for making metal cartridges (communicated by J. A. Wood, New York), No. 1656; and ABBOTT, Dockhead, for combustion of fuel in furnaces, No. 1658.—June 22, DUFOUR, Paris, for metallic packing, No. 1668.—June 23, DUNN, Pendleton, for machinery for turning, shaping, and cutting metal; POUPARD, Blackfriars-road, for screening coals and other matters, No. 1682.—June 26, MILROY, Edinburgh, for excavating apparatus, No. 1701; and LAKE, Southampton-buildings, for making white lead (communicated by Messrs. Bell and Fell, New York), No. 1703.—June 27, HENSHALL, Ardwick, for cutting files, No. 1715.—June 28, GEDGE, Southampton-buildings, for metal boxes, tins, or cases (communicated by Allain and Trottier, Paris); and C. E. BROOMAN, Fleet-street, for alkaline permanganates (communicated by Du Motay and Marechal, Metz), No. 1726; and DEACON, Kennett Ironworks, Reading, for machinery for drilling metals, No. 1729.—June 29, HOBSON, Middlesboro', for smelting iron ores, and apparatus used with blast-furnaces, No. 1734; and GRIFFIN, Silvertown, for combining India-rubber with metallic substances, No. 1740.—July 2, BONNEVILLE, Paris and Bayswater, for furnaces and kilns (communicated by Martin and Beranger).

Among Notices to Proceed lodged in the last list are—

No. 574, BULLEY, for cleaning iron and other vessels; No. 579, WINBY, actuating rolls for rolling metals; No. 599, YEATES, knife for opening metal cases. Any opposition intended to these must be entered on or before the 24th inst.

Among recent Patents sealed are—

No. 56, GEE, for making moulds for casting metals; No. 94, BARTHOLOMEW, for getting coal; No. 25, BLACKBURN, for furnaces; No, 57, HODGES, for raising and treating peat or bog-earth; No. 172, SUMNER, for casting metal tubes; No. 3368, BROOMAN (communication from Laigny), for acetate of lead; No. 6, BARNINGHAM, for charging furnaces; No. 469, HENRY (communication from the Chevalier Avet), for photographic surfaces; No. 1167, BORGNET, for furnaces and retorts for zinc and other ores.

SPECIFICATIONS.—The specification of LOCKEY'S patent, No. 2100, recently filed, relates to a mode of supplying aeriform fluids to furnaces, and consists in sending steam, heated air, or gas into flues leading from a furnace, in a direction away therefrom, such flues terminating in chambers in which the mixture of aeriform matter is condensed and fixed; a condenser is described, consisting of a chamber partly filled with water, and provided with trays or grids, supplied with leaves or other absorbent.—BOETIUS' specification, No. 2105, relates to constructing around outer walls of furnaces, or between them and the fire-places, passages for conveying air to the combustible gases evolved from the fuel, whereby the air is heated by the walls before being mixed with the gases.—SCHAD'S specification, No. 2070, is for treating base rosaniline or its salts with chlorides, iodides, or bromides of ethylene, whereby violet colours are produced.—BLANCHARD'S specification, No. 2071, is for manufacturing terra-cotta, by combining refuse or slag of smelting and other furnaces with refuse granite, slate, or like matter, and refuse ceramic substances, alumina, alkali, chalk, silica, and fish-shells.

Among Provisional Specifications not proceeded with is JEE'S application, No. 2087, for a mode of producing coloured salt for table use, by adding pigment or colouring matter to the brine when boiling down, or when the salt is being roasted, dried, gauged, or prepared for sale, but preferably while the brine is being evaporated.—HENLEY, No. 2072, describes a mode of promoting combustion, by bringing jets of steam in contact with fuel, and conveying gases so generated through pipes to nozzles, where they meet atmospheric air, driven by fans or blasts.—PARRY, No. 2120, describes a composition, and mode of coating ships' bottoms, by first painting with zinc, oxide of iron, and red lead, and then coating with zinc white and oxide of iron, and next applying red lead, white lead, and oily matters.—JOHNSON (communication from Monsieur Drivet), No. 2106, for preparing spongy or porous metals, consists in precipitating a saturated solution of a sulphate, or other metallic salt, by a galvanic current, first adding the acidulated water and sulphuric acid, then precipitating the solution in an amorphous state, and continuing the current till the hydrogen is disengaged.

NEW OXIDE OF MAGNESIUM LIGHT.—It is well known that the oxide of magnesium is practically infusible, and that it has the property of being volatilised, but in the smallest quantity, in a flame of oxygen and hydrogen mixed together, and without imparting any colour to that flame. The oxide has also the property of spreading, on being placed within the flame, an intense, bright, and constant light, and which is admirably suitable to photography. Many magnesium salts, and particularly chloride of magnesium and carbonate of magnesia, have the property of leaving some oxide of spongy magnesium on being decomposed by the oxyhydrogen flame. Availing himself of a knowledge of these principles, Prof. Prospero Carlevaris, of Genoa, proposes to employ the process now to be described. A piece of chloride of magnesium, larger or smaller, according to the effects of light required, is placed upon a small prism of gas retort coal, and upon it, through a small tube purposely made, the flame of the oxyhydrogen gas (the mixture of oxygen and hydrogen) is directed; or a prism, or even a small and well-compressed cylinder of carbonate of magnesia, is placed within the flame from the same mixed gases. The chloride of magnesium or the carbonate of magnesia is directly decomposed and resolved into oxide of spongy magnesium, from which the intense, bright, fixed, and constant light comes forth, causing all the chemical phenomena of diffused sun light. The gases of the said combination, which are pure hydrogen, or even ordinary illumination gas, and pure oxygen, or even atmospherical air, flow separately from two different gasometers, and are mixed only in a very small tube at the end of the pipes. They can be prepared in the ordinary way when wanted in small quantities; if wanted on a large scale, pure hydrogen is prepared by causing steam to pass over incandescent charcoal. Oxygen is prepared with manganese, and hypochlorite of lime with manganese and silicic acid, or with dry sulphate of iron, the products of whose decomposition are caused to pass upon platinated pumice-stone, turning to profit the sulphurous acid resulting from the process to the preparation of sulphites. The invention is, therefore, essentially the production of light, by placing the oxide of spongy magnesium in a flame produced by a mixture of oxygen and hydrogen.

PROPOSED TUNNEL UNDER THE CHANNEL.—One of the most experienced and successful engineers of our time, Mr. Hawkshaw, has long contemplated the practicability of this enterprise, and has for about two years been engaged in a geological investigation of the localities. Borings are now being made at a considerable expense in the neighbourhood of Dover, and, by permission of the French Government, between Calais and Boulogne; and in the course of this summer explorations will be made in mid-channel. Such trials are essential, in order to obtain positive knowledge concerning the nature, extent, and thickness of the strata. It is proposed to carry on the excavation for the tunnel from both ends, as well as from shafts in the Channel. At the top of the shafts powerful steam-engines will be erected for pumping, for drawing up the excavated material, and for supplying power to the machinery by which excavation will be effected. The tunnel will communicate on the French side with the Northern of France Railway, and on the English side with the South-Esstern, and London, Chatham, and Dover Railways, so that there will be an unbroken line of railway communication between London and Paris. Mr. Hawkshaw will not be able finally to decide upon the details of this great work until the completion of the borings now in progress. It is calculated that the tunnel will take 20 years to complete, and cost not less than 20,000,000*l.*

PETROLEUM COMPANY OF HANOVER (Limited).—At the first annual meeting, recently held, the report stated that the company on its formation acquired by purchase the exclusive mineral rights over a large extent of country in the kingdom of Hanover. Since then the directors have been enabled, by the acquisition of further grants, to add considerably to the company's property both in value and extent, so that now the company's mineral rights extend over an area of more than 100,000 acres, an area about ten times greater than that of Oil Creek, in Pennsylvania. The whole of these mineral rights are held in perpetuity on very favourable conditions, and subject to the payment of light dead rents, varying from 30*l.* to 60*l.* per annum for each commune of about 2500 acres, and commencing in about two years from this time. In these grants to the company coal and all other minerals are included as well as petroleum. The various natural oil springs, and other surface indications, afforded very strong evidence of the existence of large deposits of petroleum on the company's propecty, considerably more conclusive than the indications which first attracted attention to the famous oil regions of Pennsylvania. What these surface indications pointed to has been confirmed by the results hitherto obtained from the wells that have been sunk. These results are of a most satisfactory and encouraging nature, so much so, that in the opinion of the directors, and in that of several competent judges who have been consulted, no doubt whatever exists that the company possesses a property only requiring to be developed to become a source of wealth to its proprietors, as great as that which Oil Creek has yielded, and still continues to yield. In addition, the company's property possesses considerable local advantages. The whole of the land, the mineral rights of which have been ceded to the company, is intersected in every direction by good roads. A trunk railway goes through it, affording rapid and cheap means of carriage to all the continental markets, whilst labour and fuel are also abundant and cheap. From these advantages the petroleum in the company's grants can be raised at a much less cost, and will realise much larger profits, than is the case in the Pennsylvanian oil districts. Previous to the acquisition of the property by this company the ground had been bored in one place by the late proprietors to the depth of about 200 ft. from the surface. In this shallow boring two streams of oil were struck, one at a depth of 65 ft. and the other at 180 ft., which yielded, on being pumped, from one to two barrels per day. This well has continued productive ever since. In December last three of the directors, accompanied by one of the largest proprietors, visited and carefully inspected the company's property, and from their inspection they were enabled to confirm everything that had been previously stated with regard to the value of the property, and the many indications that existed of the property being rich in petroleum. Boring operations have been carried on as vigorously as circumstances would admit of, under the superintendence of Mr. Winter, an experienced boring engineer from Westphalia, whose services have been secured on very favourable terms, Mr. Winter contracting to find all the implements, tools, and labour necessary. The company paying him at the moderate rate of 400 thalers (about 60*l.*) for every 100 ft. of bore. With the view of developing the company's property more rapidly, portions amounting to about 6000 acres have been leased to other companies. The lessees, besides fulfilling all the covenants of the original grants, paying to the company a royalty of one-third of all the oil raised. The oil obtained from the productive wells belonging to the company is of the best quality, and amounts, up to the present time, to about 140 barrels, of which about 90 barrels have been sold at 22*l.* 10s. per ton, leaving some 50 barrels in stock; and this is being weekly added to. [Since this report was presented the directors have received advices from the company's manager in Hanover, to the effect that the political changes in that kingdom are not likely in any way to affect the company's rights. No interruption whatever has occurred in the progress of the work, either at Hagnissen or at Schnde, and that there is every indication that oil in considerable quantities will soon be obtained.]

FOREIGN MINES.

ST. JOHN DEL REY.—May 29: The produce for second division of May, 11 days, 19,565 oits., yield 10·518 oits. per ton; remittance, 105,484 oits.= 1013⅓ lbs.

EAST DEL REY.—Sao Vicente, May 30: The lode in the main sump continues large, and it has somewhat improved in appearance, the stone not being so hard or crystallised as when last reported on, thus being much more favourable for breaking, and we hope more productive. We have sunk 7 ft. 9 in., and extended the incline plane 14 ft. At No. 1 level west the lode is larger, and we think more productive.—Tattoo Level: The lode has been very contracted since our last report; but we think there is little doubt but it will open again, especially as it gets more directly under Bernardo's workings; the end has been driven 9 ft. 9 in. No. 1 level west has been extended 6 ft. 2 in.; the lode presents a very kindly appearance, and continues to open in size, being now about 7 ft. wide.—Eastern Section: We have completed the rods, pitwork, &c., at this place, and effected a communication between our works at the experimental shaft and the old Brazilian workings, and have commenced to cut down the diagonal shaft, the upper part of which will require to be closely timbered. The eastern end has been driven 8 ft. 4 in.—Jacotinga: We continue the cross-cut to cut this lode, but have made very little progress during the month, the ground having become very soft, obliging us to secure it with timber. Should it continue thus, we shall not be able to reach the layers as soon as expected. Produce for the month, 793 oits.

FRONTINO AND BOLIVIA (SOUTH AMERICA) GOLD MINING COMPANY (Limited).—Capt. Tregoning, in a long and voluminous report upon the various mines embraced in the Bolivia property, dated April 17 last, concludes with the following remarks:—The way I propose to work this (the Salada) mine is to go down with Crosskill's shaft, extend levels east and west on the lode, sink winzes every 10 fms., make back stopes, and take away the lode between the levels; keep the winzes in the western part of the mine going down as fast as the water will allow, which is being drained by Crosskill's shaft. The points that I think should be pushed on as fast as possible are the two levels driving east on the lode from the open cut, and the sinking of Crosskill's shaft. It may be difficult to calculate what we can do in a certain amount of time, as much timbering is necessary; but to me there is no doubt of these mines being made to pay when once they are fairly laid open, and which I hope will be sufficiently advanced to enable me to keep the stamping-mills continually at work with 24 heads in about three months from this time, with sufficient back stopes open for the keeping up of a regular supply; and if we have the good fortune to meet with the bunch of gold that is said to have gone down about 20 fms. west of Crosskill's shaft we must raise a large quantity of gold. I must give up all thoughts of finding anything good in the arches and pillars left by the old workers, but at once go down with Crosskill's and other shafts on the lode, which I must commence as soon as possible, and lay the lode open east and west, and make a permanent mine. Up to the present time there has been but little more put through the stamps than what has been taken away from the old arches and pillars. When the Indians left these pillars they considered them not worth their notice. Plans and sections will follow as early as possible. The steam-engine and stamps are very strong, good machines. The steam-engine must have been a work of great labour to plan and make in so many parts. The engine pumps the water from the mine and works the stamps. The railroads are well laid out, but the underground works are not far advanced, when compared with the long time they have been working; in fact, that which they have been putting through the stamping-mills is little more than the refuse left by the old workers. It is of no use to think we are going to make a mine where the former workeas could get nothing; we must go down and make a mine under all the old workings, where, I think, there is a fair chance of the company doing good, and making a permanent mine; and with this object we are now sinking the shaft as fast as possible, with a force of six English miners and as many native labourers as are required to keep the water under. This is a most important point, and must be carried on with all the dispatch possible. Capt. Edwards, writing from Frontino, under date May 10 (a short time after his arrival) says—I like the appearance of the lodes very much, especially in the western hill, upon which we purpose to commence operations. I have not been able to examine all the property as I could wish, but from what I have seen I have every reason to believe that it will pay well when properly laid open, and the machinery put in good repair. Mr. Rouch, who is actively engaged in promoting the company's interest and welfare in the country, forwards the important information that the property has been duly and legally registered. He says—"Your property at Bolivia is a great deal more valuable than any agent of the three companies has ever seemed to be aware of. I have but one object in view, and that is the raising of your company into prosperity, which I am very sure can be done." The remittance of gold per last mail amounted to 400*l.*

LUSITANIAN.—Palhal: At Taylor's engine-shaft, below the 100, the new plunger-lift is in its place, and working very well; the water is in fork to the bottom of the shaft, and sinking will be resumed to-morrow. The lode is 2 ft. wide in River shaft, below the 70, with a branch worth ¾ ton per fm. The 60, west of Oak engine-shaft, on the great caunter lode, has a lode 1½ foot wide, composed of country and a little flookan. In the 100, east of Taylor's back lode, the lode is 2 ft. wide, composed of quartz and a branch of ore, worth ¾ ton per fm. In the 100, west of Taylor's, the lode is unproductive. The lode in the 90, west of Taylor's, is 3 feet wide, composed of dry flookan. The lode in the 80, east of Taylor's, is 2½ feet wide, composed of quartz and ore, worth ½ ton per fathom. In the 70, east of River shaft, the lode is 2 feet wide, composed of quartz and flookan. In the 28, west of Perez' shaft, the lode is 1 foot wide, with good stones of ore. In the 18, west of the same, the lode is 6 inches wide, and unproductive. In the adit level west the branch is 6 in. wide, composed of flookan. In the 80, east of slide lode, the lode is 6 inches wide, composed of flookan. In the 70, east of slide lode, the lode is 20 inches wide, composed of soft flookan and stones of ore. In the 28, east of slide lode, the lode is 8 in. wide, yielding stones of lead. The 50, west of the cross-cut at Taylor's, has a lode 2½ feet wide, composed of white prian, country, and stones of ore, not sufficient to value. The lodes in the 50, east of the same, seem to be diverging, being in all 6 ft. wide; the ore towards the north is poor, towards the south it is worth ½ ton per fathom. In the 60 cross-cut, north of River shaft, the ground is a hard gneiss. The 20 cross-cut, south of the great caunter lode, is still in a hard stone. We have began to drive a cross-cut in the 38, south of Taylor's, south of Mill lode, to try to cut the same lode we have in the 50. The lode in winze No. 60, below the 90, is 1½ foot wide, composed of quartz. The lode is worth ½ ton per fathom, in winze No. 61, below the 80, rising above the 90, to meet the winze No. 61, the lode is producing good stones of ore; the lode is worth ¾ ton per fm. in winze No. 62, below the 70.—Stopes on Basto's Lode: Above the adit, west of Perez' slit, the lode is worth ½ ton per fm. Above the 18, east and west of Fonsaca's winze, the lode is worth ⅔ ton per fm. Above the 60, west of Joaquim's winze, the lode is worth ½ ton per fm. Above the 70, between Taylor's and River shaft, the lode is worth 1¼ ton per fm. Above the 80, east of Domingo's winze, the lode is worth 1 ton per fathom. Above the 70, east of Nunez' winze, the lode is worth ½ ton per fm. Above the 80, east and west of Robeiro's winze, the lode is worth ¾ ton per fm. Above the 90, east and west of Taylor's winze, the lode is worth ¾ ton per fm. Above the 60, east and west of Dia's winze, the lode is worth ¾ ton per fm. Above the 70, east of Campino's winze, the lode is worth 1 ton per fm. Above the 38, west of Mill lode, the lode is worth ½ ton per fm. Above the 50, east of Norte's winze, the lode is worth ¾ ton per fm. Above the 50, east of Machado's winze, the ore ground is worked out. Above the 60, east of Jacintho's winze, the lode is worth ¾ ton per fm. Above the 60, west of Jacintho's winze, the lode is worth ½ ton per fm, Above the 70, west of Savara's winze, the lode is worth 1¼ ton per fm. Above the 50, west of Lauranco's winze, the lode is worth 3 cwts. per fm.—Carvalhal: The lode in the incline shaft, below the 30, is 1¼ foot wide; it has improved, and we hope will soon be of value. The lode in the 30, east of said shaft, is 1 foot wide, composed of quartz, spotted with lead; water is coming out of it with great force. The 30, west of the same shaft, has a lode in two parts—the north is 8 inches wide, composed of quartz and mundic; the south is 6 inches wide. The 20, west of Incline shaft, has a lode 2 feet wide, composed of quartz and blende. The 10, west of the same, has a lode 2 feet wide, composed of quartz. In winze No. 2, below the adit, the lode is 2 feet wide, composed of quartz, gossan, mundic, blende, and black oxide of copper, but neither sufficient to value. In winze No. 3, below the 20, the lode is 2 feet wide, worth ¾ ton per fathom.—Stopes on the Great Lode: Above the 20, east of incline slit, the lode is 2 feet wide, composed of quartz and lead, worth ½ ton per fathom. Above the 20, west of the same, the lode is 2½ feet wide, worth ⅔ ton per fathom.—Figueiredo Mine: The ground in Henty's slit, below the surface, was decomposed granite, but at the bottom, coming from the south, is a soft killas, with a branch 6 in. wide, containing hornblende; from it there comes 10 barrels of water per hour. We sink about 4 metres per week.

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for June is 26. They have consumed 1970 tons of coal, and lifted 15·1 million tons of water 10 fms. high. The average duty of the whole is, therefore, 51,700,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Cargoll Mines—Michell's 72 in.	Millions	55·3
Crane—70 in.		63·6
Great Wheal Busy—Harvey's 85 in.		66·5
Great Work—Leed's 60 in.		67·6
South Wheal Frances—Marriott's 75 in.		58·1
West Caradon—Elliot's 50 in.		60·2
West Chiverton—Hawke's 80 in.		52·5
West Wheal Seton—Harvey's 85 in.		65·0
Wheal Curtis—70 in.		54·4
Wheal Seton—Tilly's 70 in.		69·3

Mining Correspondence.

BRITISH MINES.

ABRAHAM CONSOLS.—John Vivian, July 4: The masons continue to make good progress in the building of the engine-house, stack, cylinder loading, fly-wheel, stands, &c.; the heavy part is far advanced, and nearly all the engine and stamps bought on the mine. I have men in the new engine-shaft sinking as the water falls back with the season. We have erected a smith's shop, and have our smith at work, as we shall want repairs to the engine before it can be put in again. The water has not fallen back on the great tin lode sufficient to resume working below the level in which we had the tin last, and hope to get the men to work on the tin ground shortly.

BEDOL-AUR.—Thomas Pierce, July 5: We have completed Crofts' shaft to the 70 yard level. I intend to widen Spencer's sump, in Simmond's shaft, which is down 12 yards below the 70 yard level, in Crofts' shaft, where there is a good promising vein, about 4 feet wide, composed of clay, spar, and nice lumps of ore. If this mine is carried on with spirit, as it ought to be, I have not the least doubt in my mind that it will be one of the best mines in the neighbourhood, and is certain to be a paying mine in a short time. It is not now the time for anyone to sell shares, because it will be worth ten times more, probably in two months. The men from the shaft will now go to work on the veins, and very soon there will be a deal of difference in the mine.

— T. Pierce, H. R. Harvey July 4: Crofts' shaft is completed to the 70 yard level, and cleared up ready to commence cutting down the winze below the 70; when this is done more tribute pitches can be set in the bottom of the mine.

BOTTLE HILL.—J. Eddy, July 5: The lode in the stope east of William's shaft, in back of the 34, still holds its size, 5 ft. wide; as to quality, about the same as it has been for the past fortnight. The lode in the stopes west of the western shaft, in the 17, is without alteration. The tribute ground east and west of new shaft is turning out work of moderate quality. The tributers are making good wages, even at the very low price of tin, at a tribute of 12s. 6d. in 17.

BRONFLOYD UNITED.—T. Kemp, July 4: Settings for July: The 52 west to drive on the course of the lode, to two men, at 170s. per fm.; the lode in the present end is producing 12 cwts. of lead per cubic fathom. The cross-cut to point of new shaft, to four men, at 100s.; we have about 8 fms. more to drive here. The stopes in the back of this level, east and west, to six men for each, at 35s. per fm.; lode worth 20 cwts. of lead per fm. The tributers above the 40 are breaking good ore.

BRYN GWYN.—H. Nottingham, July 3: The rise in the end of the south-west level, from the middle of incline, is up to the hanging ground of the flat, therefore it is suspended, and the men put to drive west from the top of the rise on an east and west joint, from which we have broken some ore from the roof of the level to the top of the rise, and there is a little now leading off to the west, and very nice ground with it, but the joint is narrow. The cross-cut driven west from the above level has crossed a narrow joint, containing a good deal of spar, and a little lead, which I think is the joint we were driving for; this is suspended at present; I have put the men to try in the bottom of this level over the lower level, driving south-west from incline, where we had a little ore in driving the top and bottom level. The lower level, driving south-west from incline, is not looking so promising as when I wrote you last; the ground is of a lead-bearing character, but less productive. Clark's level is up near to the northern boundary, and is less productive for lead. We have a few places to try about this level yet, where we have left a little ore by driving through, which will now be tried. There is no change in any other part of the mine.

BRYN GWYOG.—S. Harper, July 5: The lode in the 102, east of engine-shaft, is now 10 ft. wide, composed of quartz, fluor-spar, blende, and lead ore—a very promising looking lode. From the large run of ore ground, which has proved so productive at the 90, which dips eastward, I fully believe we are just entering on it at this point (102), and have but little doubt that, ere long, we shall have a good course of lead in this level. The lode in the 90, east of engine-shaft, is 2½ ft. wide, worth 1 ton of lead ore per fm. The lode in the same level, west of said shaft, has improved since my last; it is now 3½ ft. wide, and worth full 3 tons of lead per fm. I believe we are entering at this point on the course of lead gone down in the bottom of the 75, west; if so, there is no doubt we have a fine piece of ground before us in this point. The tribute pitches at this level (90) continue to yield their usual quantities of lead. The lode in the 75 west is 1½ ft. wide, producing saving work. Edward's pitch, in the back of the 75, on north and south lode, is again improved since my last report. Brooks' run, in the back of the 66, has also improved, and is now worth 4 tons per fm. We have communicated Bramwell's shaft to the rise below; holing good. We are at present preparing for sinking below the 65 yard level. We have four men at Michell's shaft, of which I will more fully inform you in my next. All other points continue the same as for some time past. We purpose sampling 45 tons of lead ore.

CAPE CORNWALL.—R. P. Goldsworthy, July 4: Our operations throughout these mines are progressing satisfactorily. We have not yet found the south wall of the lode in the 90 west; the portion we have taken down is of a highly promising character. The lode in the 80, and also in the 70 west, retains its size, and is promising for speedy improvement; and will, doubtless, ultimately lead to something substantially good.

CARADON CONSOLS.—S. Bennetts, July 3: The lode in the extreme west end of the rise, in back of the 80, is about 1 ft. wide, and worth from 6l. to 7l. per fm. In the 80 west end it is again intersected by a cross-course, become disordered, and heaved about a foot north. In the east end there is but little alteration since last reported on, the lode being somewhat larger, but not quite so orey. The winze below the 54 continues favourable for sinking, and we hope to communicate this with the rise in about five weeks.

CARDIGAN CONSOLS.—Henry Boundy, July 3: Esgairffraith: The lode in the adit level, driving east, is still very large, and of a most promising character, yielding occasionally good stones of copper ore. At the engine-shaft, sinking below this level, the ground is a little improved, and of a good description, spotted with lead and copper ore. The lode in the 20 east is improving, now yielding good saving stuff for lead; this looks very encouraging, seeing we have yet 50 fathoms to drive before reaching the rich ore ground passed through in the adit. The lode in the 20 west is spotted with blende, mundic, and lead ore of a promising nature. No change to notice in any other part of the mine.

CASTELL CARN DOCHAN (Gold).—J. Parry, July 4: We have set the raising and delivery of the stuff on the spalling-floors for this month at 6s. per ton. I have nothing fresh to report from the stopes. The lode in the north-east driving from shaft has greatly improved lately both in width and character; it looks very promising for visible gold. We have cleared out the stamp coffers, and shall be able to start 16 heads this evening; the other four heads to-morrow morning. The quantity stamped last month is 184 tons. Gold obtained from amalgamators to-day, 7 ozs. 1 dwt. We shall melt the month's produce on the 12th instant.

CENTRAL MINERA.—T. Hughes, July 5: Victoria Engine-shaft: The lode in the 60 yard level east yields some good stones of lead, and very promising. The lode in the stopes on top of the rise, in back of this level, is worth 15 cwts. of lead per fm., a good-looking lode.

CLARA UNITED.—J. Davis, July 4: Settings for July: The 50 to drive west, to four men, at 180s. per fm.; lode worth 1¼ ton of lead per fm.; ground hard and wet. The stope in the back of this level, 13 fms. west of shaft, to four men, at 65s. per fm.; lode producing 10 cwts. of lead per fm. The stope in the back of this level, 26 fms. west of shaft, to two men, at 70s. per fathom; lode worth 12 cwts. of lead per fm. The stope in back of the 40, to four men, at 75s. per fathom; lode worth 12 cwts. of lead per fm. The winze under the 20, to four men, at 120s. per fm.; lode yielding 8 cwts. of lead per fm.

CRENVER AND WHEAL ABRAHAM UNITED.—Wm. Kitto, July 5: The water is forked 5 fms. below the 80, at Wilson's engine-shaft, and the sumpmen are engaged cutting hitches for bearers in order to take up the weight of the bottom part of the lift, that we may add on two or three pumps more, which will be required, as we have not seen the 80 at the middle sump-shaft. We have got through the choke in the middle engine-shaft, and dropped a line 6 fms.; the sumpmen are dropping the lift so as to leave the 80 dry, or 2 fms. below, that we may begin at once to cut ground to fix the plunger-bottom; perhaps 4 or 5 fms. will be quite enough for us to fork the water before we get the plunger to work in each shaft. We have nine men clearing and repairing old Crenver footway-shaft, and ladder-road completed to the 47; as soon as it is made good to the 80 we shall at once begin to search the eastern end of ground to see what discoveries we can make in this direction. All other operations are being carried on as last reported.

CROWAN AND WENDRON.—R. Reynolds, July 3: The lode in the 60 west is from 2½ to 3 ft. wide, producing stones of grey and yellow copper ore. At present the shaftmen are taking down some ground on north side of the engine-shaft preparatory to sinking, which I hope will be resumed in another week. No change to notice in the 48 east since last reported. The consumption of coals throughout the mine for the last month was about 14½ cwts. per 24 hours.

CUDDRA.—A. Cundy, July 4: Walker's shaftmen have finished casing, dividing, and bed-planking the shaft from the 117 to the 130, and are now busily engaged cutting the plat in the 130, which we shall push on as fast as possible. In the 117 end, driving west, the south part of the lode is 10 ft. wide, of a very promising character, composed of quartz, peach, and tin, worth for the latter 35l. per fathom for that width. In the stope in back of the same level, west of No. 1 winze, the lode is 12 ft. wide, worth 45l. per fathom. In cutting out the lode east of No. 1 cross-cut, and towards the shaft, the south or tin part of the lode is still about 6 ft. wide, worth 7l. per fathom. In No. 1 stope, in bottom of the 105, the lode is 8 ft. wide, worth 16l. per fathom. In No. 2 stope, in bottom of the same level, and west of the winze, the lode is 11 ft. wide, worth 25l. per fm.

DALE.—R. Niness, July 2: There is nothing new to communicate regarding the appearance of the vein in the old or new mine. We have this day commenced cutting a winze brace in the old mine to put up a windlass for the purpose of drawing the stuff, &c., from the new Pipe vein.

DEVON AND CORNWALL UNITED.—T. Nelli, July 3: In the 24 cross-cut, north and west of Ley's shaft, we have not yet cut the lode, but the indications are very favourable.—William and Mary: In the 34 east we have met with a slide, which for the present has disordered the lode. We have commenced to sink a winze in the bottom of this level; lode 6 ft. wide, worth 8 tons of ore per fathom. One stope in the back is worth 5 tons per fm. We are sinking the shaft below the 34 by the side of the lode, so as to get down to the 46 as quickly as possible. No change in any other part of the mine.

DYFNGWM.—E. Davies, July 3: The 82 east driving is improving gradually. The 82 west has made some further progress; in the last fathom the bunch of ore has become narrower, but is again opening, and has a very kindly appearance. The stopes in back of the 82 west are quite as rich and productive as when inspected. To-day we have been able to let to 30 men.

EAST CARADON.—J. Truscott, July 4: Caunter Lode: In the 100 east the lode is about 3 ft. wide, but nothing to value. The 90 east is worth 18l. per fm. The 90 west produces stones of ore. The 80 east is worth 15l. per fm.—South Lode: The 90 east is worth 10l. per fm.; the 90 west, 10l. per fm.; the 80 east, poor; the 70 east, 14l.; and the 70 west, 20l. per fm.—New Lode: The 70 east is worth 6l.; and the 70 west, 8l. per fm.

EAST CARN BREA—(*Special Report*).—W. Tonkin, July 2: The 70, driving west of the old engine-shaft, on No. 1 lode, is 2½ ft. wide, and will turn out 2 tons per fathom, worth 7l. per ton. They will commence to sink a winze in the bottom of this level, which will turn out from 2½ to 3 tons per fathom. Thomas's engine-shaft is sunk 3½ fms. below the 70; the lode is about 3 ft. wide, composed of mundic, quartz, and stones of ore—not sufficient to value. It will take about three months from this time to complete this shaft to the 80, when they will commence to drive east and west. I inspected this mine about a year and a half ago, when they drove over a fine bunch of ore in the 70. I valued the lode then at 8 tons of ore per fathom; this ground is standing still in the bottom of the 70. This speaks well for the 80. In the 70, driving east of Thomas's, the end is poor, and nothing to value. The 60, driving east of Thomas's, on the No. 3 lode, on the south part, will turn out 2 tons per fathom, and looking promising for a much further improvement. This lode is greatly improved since the meeting; it was nothing to value then. The 60 east, on the north part, on No. 3 lode, will turn out 2½ tons per fathom. I should not be surprised if I heard tell that they had a great bunch of ore in this end within the next 3 fms. driving. The 50, driving east of Thomas's, on No. 3 lode, is saving work for copper ore. Buckley's shaft is sunk to the 60, on No. 6 lode. The skip-road will be put in and completed this week to the 60, when they will commence to drive east and west from the said shaft. The 50, driving east of Buckley's, is producing 1 ton of ore per fathom. The 50 west is poor. The stopes are turning out a very fair quantity of ore. The tribute pitches are looking favourable. They sampled last time 221 tons, and they will be able to keep up that return, and increase it; and they will lessen their cost from 300l. to 400l. per month. I have closely watched the present management, and I am well pleased with it. I believe the right men are in their place. The old party left the management in a very unmining-like manner. If they had the present management five years we should not have lost so much money.

EAST GUNNISLAKE AND SOUTH BEDFORD.—Jas. Phillips, July 5: The men are making good progress in Gard's shaft. The lode in the shallow adit continues its size and character, and is a very fine looking lode. We are driving by the side of the lode in the Chimney Rock deep adit.

EAST JANE.—Thomas Hodge, July 5: The water is drained to the bottom, and every man to his place at work. The bargains throughout the mine are much the same in appearance as when reported last week; the 48, south end, on the west lode, is looking very encouraging.

EAST LAXEY.—R. Rowe, July 3: The engine-shaft is now sunk 15½ fms. below the deep adit level, on the course of the lode, and in the bottom I see no change sufficient to note. Our object is to get down to a 20 fm. level as fast as possible, and then push on northwards to prove the shoots of gossan and orey ground gone down in bottom of the adit. In the adit end, driving north into the hill, the lode is again increasing in size, now about 1 ft. wide, with gossan, and occasional stones of copper ore.

EAST PROVIDENCE.—J. Nancarrow, Wm. White, July 4: The sinking of Boorman's shaft is continued regularly; there has been no lode taken down since last report. The lode in the 82 east yields good stones of tin. The 70 east is worth 5l. per fm. The 50 east is worth 5l. per fm. The winze below this level is holed to the 60, and the ground is now being worked on tribute. There is no alteration in the pitches to report.

EAST ROSEWARNE.—J. James, July 5: In King's shaft, sinking below the 85, the lode is 18 inches wide, producing stones of ore. In the 85, east of King's shaft, the lode is small and poor. In the 85, west of King's shaft, the lode is 15 inches wide, of a promising character, and worth at present about 5l. per fathom. I think we are closely approaching a good lode in this level. In the 85, east of Hallett's shaft, the lode is small and unproductive. There is no change to notice in the 85, west of Hallett's shaft. The slide is still in the end, and intermixed with the lode. This being the case, I think there is productive ground both over and under the level. The stope in back of the 85, west of Hallett's shaft, is worth 13l. per fm. The stope in back of the 75, east of King's shaft, is worth 8l. per fathom. The stope in back of the same level, west of shaft, is worth 9l. per fathom; and the stope in the bottom of the 65 is worth 6l. per fathom.

EAST SNAEFELL.—R. Rowe, July 3: I have been at this mine to-day. The lode in the deep adit, driving north of Glensherry, continues large, and of a very promising nature. In the shaft on the hill side, south of the river, we have, at 9 fms. deep, started out levels north and south on the course of the lode; in the former direction we have driven 15 ft.; lode about 4 ft. wide, and carrying a steady rib of lead on the hanging wall about 2 in. wide. The level south is driven 2 fms.; lode 3 ft. wide, mixed throughout with lead and jack, and presenting a prospect altogether very rare for any mine at this depth. We are busily preparing for the erection of the water-wheel.

EAST ST. JUST UNITED.—John Carthew, Peter Casley, July 3: Phillips's engine-shaft is now down 11 fathoms below the 10; we shall stop sinking for a short time, fix sollar in shaft, and cut into the lode. In driving about 6 fathoms west we shall cut the caunter lode in soft ground. We intend to drive south on the caunter, to cut other lodes. We are glad to report the branch of tin in the winze below the 10, west of shaft, is holding down very well.—North Bosorne Flat-rod Shaft: The tin lode in the winze below the 20 is holding down very well. We are driving the 30 east from shaft. We have 5 fathoms more to drive to get under this good run of tin ground. This end is very much improved since we began to drive; the lode is large, producing stones of tin, and very kindly ground.—Cranjack Flat-rod Shaft: We have just fixed the plunger-lift in the 20, which is now in working order. We have set this shaft to sink in a large, kindly lode. We are driving the 20 and 10 fathom levels east; a kindly lode, but not to value. On Wheal Venton lode we are still making more discoveries. We are sinking No. 1, No. 2, and No. 3 winzes below the deep adit level, in tin ground which will pay, and are still clearing east. We have no doubt in a few months we shall have a long run of tin ground working on this lode.

EAST WHEAL AGAR.—W. Johns, J. Williams, July 3: At Dunsford's engine-shaft we have fixed all the necessary pitwork required for the present, cased and divided the shaft to the 70, and cut a plat, which will now enable us to drive the 70 without the least obstruction. The 45 west of cross-cut, on Hext's lode, is still producing good stones of yellow copper ore. In the 45 and 30 fm. levels cross-cut south we have a beautiful channel of ground as we are nearing the junction of killas and granite in each of these ends. Fair progress has been made towards the next lode, and we are anxiously looking forward to the cutting of the same, believing our chances are good. Our tributers are working on, and we shall sample again at the usual time.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, July 4: There is no change in the engine-shaft, sinking below the 85. The lode in the 85 west will produce 1¼ ton of ore per fm., and we like the appearance of the lode better to-day than we did on Saturday; there are branches still going north towards the northern part, which is letting out pretty much water. The stope above this level will produce 3 tons of ore per fm. The lode in the 75 east is from 1 ft. to 15 in. wide, of quartz, with strong yellow ore. The stope below the 75 west is worth for ore and tin 12l. per fm. The stope below the 65 west is worth 5l. per fathom. No other change.

EAST WHEAL RUSSELL.—J. Goldsworthy, July 4: Homersham's shaft is in regular course of sinking below the 140; fair progress is being made. In the 140 cross-cut, driving north, east of Homersham's shaft, the ground is becoming more charged with water, which indicates the end being nearer the intersection of the lode. The stope in back of the 140, east of Barkell's rise, is worth 8l. per fathom. The stope in back of the 130, west of Barkell's winze, is worth 12l. per fathom. The stope in back of the 130, east of Barkell's winze, has improved, worth 30l. per fm. There is no other change to notice since our last report.

— July 5: The sinking of Homersham's engine-shaft below the 140 progresses favourably, and the ground congenial for the production of mineral.—Homersham's Shaft: In the 140 cross-cut north the ground is somewhat easier; water is also coming away, indicating the near approach to the lode. The lode in the back of the 130 east, and east of Barkell's rise, is worth 8l. per fathom. In the stope in back of the 130 east, and east of Barkell's winze, the lode is worth 10l. per fathom. The lode in the stope in the back of the 130, east of Barkell's winze, is greatly improved, being at present a good course of ore, worth fully 30l. per fathom.

EAST WHEAL TOLGUS.—July 4: The ground in the adit cross-cut south is moderately easy for spending; working by two men and two boys, at 4l. 10s. per fm. The men (six) are taking out air salters, tramroads to the 46 and 54, and stripping John's shaft as fast as possible.

FRANK MILLS.—J. P. Nicholls, J. Cornish, F. Cornish, July 4: The 130 fm. level north, on the east lode, has much improved since our last report, and it is now 5 ft. wide, yielding 1¼ ton of lead ore per fm., with every prospect of a still greater improvement. The 130, driving south, on the same lode, is not looking so well, being now comparatively poor. This lode, where we are engaged opening on it, behind the last-named end, will yield 2 tons of lead ore per fathom. The 130, driving south on the west lode, contains a little lead ore, but scarcely enough to value at present; however, the ground is congenial, and the lode presenting a very promising appearance. The west lode, in the 115 north, continues unproductive of lead ore to value. The two stopes in the back of this level are continuing to yield ½ ton of lead ore per fm. each. In the winze sinking in the bottom of the 100 north the lode is yielding occasional stones of lead ore. The two stopes in back of this level are yielding ½ ton and 7 cwts. of lead ore per fm. respectively. The lode in the 45, north from engine-shaft, is yielding about 3 cwts. of lead ore per fm. The two northernmost wide stopes, in back of this level, at the north part of the mine, are getting up near the surface, and they are, consequently, now become poor and almost exhausted. The south stope, in the back of this level, is yielding 4 cwts. per fm., and the new stope 3 cwts. per fathom. Hancock's pitch, in the back of the 45, south from middle air-shaft, is still looking very good, whilst all the other pitches are looking much the same, on the whole.

FURSDON.—J. Collins, July 4: In the 31 west the ground to the north is very hard, and looks like the capel of a lode; in the south there is a favourable change. I hope we shall make more progress in driving; ground driven this week 2½ feet. We have taken the men from the shaft for a little time, and put them to drive in the 21 east on a lode, with an idea to cut the shoot of ore gone down in the bottom of the 11 east, where we have commenced driving in the 21; the lode is large, composed of peach and capel, and some good spots of ore—driving at 3l. 10s. per fathom. In the 11 east the leader of ore in the end is 4 in. wide, and in the bottom of the end 10 in. wide, a good-looking capel running parallel with the ore; judging from present appearance we expect good results. This end is being driven east of the cross-cut 3 fathoms 4 feet. The stope in the back of the 11 east is 3 fathoms above the level, and about 3 feet behind the end; the branch of ore for 6 feet high is about 1 foot wide, and in the back will average 6 in. wide, and better quality ore than we have sold for many months past. The ground is hard for stoping. In consequence of the cross-course in the 11 dipping east, we shall have to drive about 5 fathoms to the east of it, in the 21. I should remark that the ground in the shaft has improved, and is productive of good stones of ore. On Friday last we sampled (computed) 19 tons of ore—produce, 5¾.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., June 30: Our progress in driving the 60 cross-cut, north from engine-shaft, towards the lode, has been very satisfactory during the past week. The lode in the 50 east is producing very strong mundic, intermixed with good quality ore. The lode in the 50 west is large; the part being carried is principally composed of capel and spar, intermixed with ore. The lode in the stopes in the back of this level is worth 4 tons of ore per fathom. The lode in the 40 west is improving both in size and value, being worth 5 tons of ore per fathom. The lode in the stopes in the back of this level is worth 2 tons of ore per fm. The lode in the stopes in the bottom of this level is worth 5 tons of ore per fm. The winze below the 36 is down 10 fathoms, which is for the time being suspended until the level below is further in advance. The lode in the 50, west from old sump, is now yielding 2 tons of ore per fm.

GOGINAN.—July 3: The lode in the drift going west of mine, over the 100, is 5 ft. wide, containing good branches of lead ore. The lode in the three stopes over the 100, west of rise, varies from 5 to 10 feet wide, and will produce on an average 18 cwts. of lead ore per fm. These points are being urged on as fast as possible. The three tribute pitches in the old part of the mine are producing on an average 12 cwts. of lead ore per fathom. The drawing, dressing, &c., are all going on regularly.

GREAT BRIGAN.—J. Tredinnick, July 4: The lode in the end driving west of the new shaft, at the 10, is 6 in. wide, produces good stones of copper ore, and the ground becoming more favourable.

GREAT CARADON.—S. Harpur, July 4: We are sinking as fast as possible; the ground in the shaft is the same as for some time past, composed of killas, spar, mundic, &c.

GREAT NORTH DOWNS.—T. Rich, M. Jenkin, July 4: There has been little alteration to notice in any of our underground operations during the past week. We are urging on the ends as fast as possible. The 60 and 70, west of Sleggan's shaft, are, however, looking more promising, now yielding good stones of ore. The water is decreasing in Sleggan's shaft, which we shall sink as soon as it is dry.

GREAT NORTH LAXEY.—R. Rowe, July 4: The engine-shaft is no closew upon 11 fms. below the 72; the lode is 6 feet wide, worth 2 tons of lead ore per fathom. The lode in the 72 north is 4 ft. wide, worth from 10 to 12 cwts. of lead per fathom. The stopes in the roof of the 60 north continue worth 1 ton of ore per fm. I saw no change in the other places yesterday. The new road and wheel-case for the new wheel are progressing well.

GREAT RETALLACK.—W. H. Reynolds, July 4: The new trial shaft is down 3 ft. below the adit, and in a favourable channel of ground for mineral. We sample to-day upwards of 50 tons of good quality blende, and at the usual two-monthly sampling, which is in about a fortnight, we expect to sample about 45 tons more.

GREAT SOUTH CHIVERTON.—J. Nancarrow, J. George, July 3: The north and south lodes have both come together in the 20 east, where there is now a large strong lode, composed of quartz, mundic, prian, &c., and is very promising for lead. The north lode in the west end is very porous, contains a great deal of mundic, and is exceedingly promising for lead. All the western water is coming from this end, and there is an equal quantity coming from the eastern end. The water in both these ends is drained down to the bottom of the level, and we shall prepare for sinking the shaft at once. There is nothing new in the west end, on the south lode.

GREAT SOUTH TOLGUS.—J. Daw, July 4: In the rise in back of the 166 the lode is 1½ ft. wide, producing 1 ton of ore per fathom. In the 154, east of new shaft, the lode is 1 ft. wide, producing 1 ton of ore per fm. In the winze sinking below this level, and west of new shaft, the lode is 1½ ft. wide, producing 1 ton of ore per fm. In the 140, east of new shaft, the lode is disordered by the cross-course. We have holed Noel's shaft, sinking below the 100, to the rise in back of the 125, and shall commence to drive that level in a few days.

GREAT WHEAL BADDERN.—R. Pryor, H. Tregoning, June 30: The cross-cut at the 75, south of Hill Brother's engine-shaft, has improved a little, and the ground somewhat easier for driving; the end being still in the elvan course, which is looking very promising, and a large influx of water constantly protruding therefrom. The cross-cut at the 63, south of shaft, is letting out a deal of water, and appears to be increasing; the ground is without change to notice during the week. There are several small leaders of mundic crossing the end. The masons have almost completed their work about the boiler, &c., but, owing to some small castings and feed pipes not being sent in time from the foundry, we shall not be able to get ready until some part of next week.

GWYDYR PARK.—W. Smyth, July 3: There is no change to notice in Gwyn Llifion adit end since the last report—it is hard and wet; re-set to six men, the month, at 13l. per fathom. The water has gone down 2 feet in the shaft during the last week, though the weather is still wet.

HALLENBEAGLE.—W. Bawden, June 30: At Pinniger's the sumpmen are still engaged cutting ground at the 67 fm. level, preparatory to sinking. At the 56, east of Pinniger's shaft, on the north lode, in consequence of the slide the lode seems to be unsettled. At the 56, west of said shaft, on the south lode, the character of the lode is changed in the end, now producing stones of copper ore. The 56, east of cross-cut, on the south lode, is without change since last reported. In the 40, east of King's, the lode is 18 in. wide, producing stones of copper ore. At Reed's shaft, sinking below the 53, the lode at present is 9 in. wide, worth 5l. per fathom. At the 53, east of Reed's shaft, the lode is 15 in. wide, worth 8l. per fathom. At the 53, west of said shaft, the lode is at present small. In No. 1 winze, west of Reed's shaft, sinking below the 43, the lode is 9 in. wide, worth 5l. per fathom. In No. 2 winze, west of Reed's, sinking below the 43, lode worth 4l. per fathom. At Robert's shaft, sinking below the 43, the lode is 18 in. wide, worth 4l. per fathom. At Bawden's shaft, sinking below the 43, the lode is 12 in. wide, worth 3l. per fathom. No. 1 winze, west of Bawden's shaft, sinking below the 43, is worth 3l. per fathom. No 2 winze, west of said shaft, is worth 5l. per fathom. The winze, 10 fms. east of said shaft, on north lode, is worth 5l. per fathom. The 43 fm. level ends, east and west of cross-course, on Oats's lode, are at present poor. The 33, west of Robert's, on Reed's lode, has a better appearance.

HAWKMOOR.—J. Richards, July 3: The lode in the stopes in back of the 30, east of the eastern engine-shaft, is worth 1 ton of copper ore per fm. In the back of the 10, between eastern and old miners' shafts, the tributers are at work raising tin ore, which will leave a profit even at the low price of that metal, and whenever an advance in the price of tin takes place I have no doubt it will be worth while to let all the ground we can in the same way, as it is not unlikely that at several points tin will be found (judging from present appearances) that can be cheaply raised and returned, and that will leave a small profit on its extraction.—West Hawkmoor: For the present the men are removed to the stopes in the back of the 30, east of the eastern engine-shaft. It must be remembered that we have not yet driven west of the main cross-course, on Nos. 2 and 3 lodes, which ought to be done, and if found productive it would open out a means by which the returns might be considerably increased.

HINGSTON DOWN.—Thos. Richards, July 4: Bailey's engine-shaft, sinking below the 130, is worth 20l. per fathom. The stopes in the back and bottom of the 130, east of Bailey's, are worth 65l. per fathom. The stopes in the back of the 130 west are worth 45l. per fathom. The stopes in the back and bottom of the 120 are worth on an average 35l. per fathom. The next sale of ore is computed at 600 tons.

LADY BERTHA.—F. C. Harpur, James Metherell, July 5: We have just been through the mine, and are much pleased to inform you that the engine, &c., is working well. The water is now about 6 feet above the bottom of the 51, and hope if all go well to see it in fork shortly. The lode in the 41 east is about 3 ft. wide, composed of quartz, mundic, iron, and stones of ore. In the 30 east we this morning commenced cutting through the lode, and cannot, therefore, give you its correct breadth; so far as seen, it is composed of ore and mundic, worth of the former 4 tons, or 16l. per fathom. The stope in the bottom of this level (the 30) is from 3 so 4 feet wide, composed of mundic, quartz, and ore, worth of the latter 12l. per fathom.

LEAWOOD.—J. Daw, July 2: The 30 south is looking more promising to-day, and yielding some spots of lead—a very kindly end. The 40 cross-cut is in a fine channel of ground; a very great change from what it was in the cross-cuts above this level; I think when the lode is intersected we shall find it very productive, and if the ground should continue as at present we shall cut the lode in less than three months from the day of the meeting.

MAUDLIN.—J. Tregay, June 30: Old Mine: The lode in the 80 east end is improving both in size and character; the leading part, on which we are driving, is from 4 to 5 ft. wide, composed of mundic, blende, peach, spar, and good stones of copper ore—a very kindly lode; at this level west the lode is very large, and promising for an improvement; it is now producing mundic, blende, and good stones of copper ore.—West Mine: In the 20 west end the lode is looking very kindly, and improving as we are going west, getting out under the great gossan; it is now producing come very good stones of yellow copper ore.

MINERA UNION.—W. T. Harris, July 5: Douglas's Shaft: The sinking is progressing as fast as circumstances will admit; the ground is favourable, but the water is rather quicker.—Brabner's Shaft: The lode in the rise in the 80 yard level north is 1½ foot wide, producing good stones of lead, and very promising. The ground in the cross-cut to the Red vein is the same as last reported. No. 1 pitch, in the back of this level, is worth 10 cwts. lead per fathom. No. 2 pitch is worth 10 cwts. lead per fathom. The ground in the large cross-cut consists of limestone, the same as last report.—Williams's Shaft: The lode in the bottom of the winze sunk in the 60 yard level north is worth 12 cwts. lead per fathom, and very promising.

MOLLAND.—T. Bennetts, July 4: In the 72 east we have a strong masterly lode, 3 ft. wide, composed principally of quartz and red iron, with pretty spots of grey ore interspersed, presenting a promising appearance, and producing ½ ton of ore per fm.; set to six men, 1 fm., at 7l. 15s. In the winze sinking below this level we have met with a slide, which has divided and heaved the lode to the south, consequently we have not yet met with the counterpart under the slide, but expect to shortly. The country is killas, moderate ground for sinking through, and as we have cut ground for barrow-road, &c., we shall, I hope, go down with the winze without any delay; set to four men, 1 fm., at 7l. 15s. The stopes in the bottom of the 32 east, on the north part of the lode, are producing 1½ ton of ore per fm.

NANTY.—July 4: In the stope in back of the 10, 35 fms. north of engine-shaft, the lode is about 3 ft. wide, yielding about 11 cwts. of lead ore per fathom. In searching into the heading at this point we intersected a branch of the lode, which yielded about 15 cwts. of lead ore per fathom, for 2 fms. in length, but now unproductive. In stoping east of the winze below the deep adit, 30 fathoms north of boundary, we have ore that will produce about 12 cwts. per fathom. We have still a few hands dressing.

NEW CORNISH.—James Richards, July 4: Lacthley Consols: In the 60, east of the engine-shaft, the drivage is now being carried by the side of the lode, and the ground is both favourable for exploring and congenial for mineral. The lode where last taken down is worth over 1 ton of ore per fm., and promising. In the 50, east of the engine-shaft, and east of Sleep's winze, the lode is a good course of ore, worth 4 tons, or 30l. per fathom. The lode in the stope in back of the 50 east is worth 2½ tons of ore per fathom. In the 40, east of the engine-shaft, and east of the cross-course, the lode is 3 ft. wide, and promising, being composed of mundic, peach, quartz, capel, and fully 1 ton of ore per fathom. The lode in each of the stopes (two) in the back of the 40 east is worth 2½ tons of ore per fm. We sampled on Friday last (computed) 70 tons of good quality ore.

NEW CROW HILL.—W. Trelease, July 3: The lode in the 70 east is now about 1 foot wide, principally composed of mundic, jack, peach, &c., spotted with lead ore, but not to value. No. 1 stope, in the back of the 55, on the whole, is not producing so much lead as it has done, though the lode here still presents a good appearance, and is worth in places 20l. per fathom. No. 2, at the present moment, is also less orey than it has been, but still worth in places 10 to 15 cwts. of lead per fathom, and showing throughout a very pretty-looking lode. No. 3 seems to be gradually improving, and is worth in places 12 cwts. of ore per fm.—a fine-looking lode for the whole length of the stope (57 feet long). We have no change to report in the 35 end—it is still producing stones of ore only. The ground is still hard in Louisa shaft. The men are working regularly, and doing the best they can. We are getting on very well with our dressing affairs, and we have now very heavy rains, which I hope will keep us fully supplied with water for our surface operations. I think our raisings for this month may somewhat exceed those of last month.

NEW TRELEIGH.—Samuel Michell, July 4: There is no change in the 80 fm. level since last reported on. The same remark will apply to the cross-cut in the 70 fm. level. The lode in the 60 fm. level has not been taken down for some days, but it has been cut through to-day, where it is worth 1½ ton of copper ore per fathom, and letting out water pretty freely. The stope above this level will yield 2 tons of copper ore per fathom. The lode in the stopes below this level, east and west of White's winze, are worth respectively 2 and 1½ tons per fm.—New Shaft: Good progress is being made in sinking this shaft below the 51 fm. level. The lode in the bottom is large, with a leader of copper about 5 in. wide, and, judging from appearance, I anticipate an improvement here ere long. The lode in the 51 fm. level has fallen off in value, and worth 1½ ton of copper ore per fathom; it is presenting a very promising appearance, and I have no doubt but that it will again improve. The lode in the rise above this level is looking well, and worth 3 tons of copper ore per fathom. The lode in the same level, east of shaft, is large, and producing some good stones of copper.

NEW WHEAL TOWAN.—R. Pryor, July 4: The ground in the adit level west is favourable for driving, but have not yet intersected Wheal Florence lead lode.

NORTH CHIVERTON.—Wm. Hancock, July 4: Old Sump-shaft: We have taken the men from the 70 east to fix bearers and cistern, and make other necessary preparations to drop the pitwork below this level; as this end is not forth under the winze sinking below the 60 east we have suspended the latter

for a short time, and put the men to drive the end below; lode 2½ ft. wide—saving work for blende and lead. In the 70, west of Mew's, we have not reached the end yet; in clearing we find good stones of silver-lead. In the 50, west of Mew's, the lode in the present end is 1½ ft. wide, composed of spar, spots of lead, copper, and mundic.—New Engine-shaft: The lode in the rise in back of the 43, on No. 3 lode, is looking well, producing 3 tons of good quality blende per fm., and good lead work. Other places much the same as last reported on.—P.S. Yesterday one of our 13-in. pumps in the plunger-lift at new engine-shaft burst; no doubt it will have to be replaced by another, but we may be able to patch it for a short time.

NORTH DOWNS.—J. Grenfell, July 3: The driving of the 50 cross-cut, south of King's shaft, and the 70 cross-cut, north of Bennett's shaft, are progressing satisfactorily, and the character of the ground is good for mineral, but we have not yet intersected the lode in either place. The stope in the back of the 50, on the south lode, will yield 1½ ton of ore per fathom, and has a very promising appearance as it gets up near the elvan course. The 45 fm. level, east of the above stope, will yield full 1 ton of ore per fathom, and looking better than when last reported on.

NORTH MINERA.—A. A. Thomas, July 4: We shall have 8 tons of lead for sale by next week. The cross-cut is looking more promising now than I have before seen it. There is a great quantity of spar, with spots of lead and copper. I feel quite confident that the lode will prove productive when we cut it, which we hope to do very shortly.

NORTH SHEPHERDS.—T. Bennetts, July 4: The shaftmen are now fixing rods, and making every preparation to fork the water to the 50, and with good speed we hope to resume the driving of this level in a day or two. The 20 cross-cut will be driven south with all possible speed to see the new south lode. There is no change in any other part of the mine since last report.

OLD GUNNISLAKE.—H. Rickard, July 2: At Michael's shaft the water is in fork to the 61 fm. level, where the shaftmen are engaged in fixing plunger-lift, which is in a a forward state of completion, The 21 fm. level is driven west of the said shaft about 19 fms. on the course of the lode; for the first 12 fms. driven the lode is all stoped away in the back home against the cross-course, the cross-course being cut through, and about 6 fms. driven to the west of it; for the first 3 fms. the lode seems a little disordered by the influence of the cross-course, after which it became more defined; about 6 ft. from the present end the lode will yield 1½ ton per fathom of good quality ore; the lode in the present end is about 2 ft. wide, of a most promising character, but not so productive, yielding some good saving work in places, with every indication of soon becoming more productive. The 31 fm. level is driven west through the cross-course; the backs being all stoped away east of the same, and the end suspended by the previous workers; it will take at least 5 fms. more to drive before coming under the dip of the run of ore ground gone down in the bottom of the 21 fm. level above. It appears to me that this cross-course was the extent of the old workings west by the late company; if so, that will leave you in whole ground for nearly 200 fms. in length before reaching your western boundary, with every prospect of success in making extensive discoveries of copper ore. The prospects, both at Parker's and Michael's shafts, as far as seen, warrant a vigorous prosecution under careful and practical management.

— W. G. Gard, James Phillips, July 5: We beg to inform you we have completed the plunger in the 61, at Michael's shaft. The lode at Parker's shaft still continues its size and kindly appearance, and I am happy to say is more favourable for progress. We have met with the lode west of the cross-course in the 31, west of Parker's shaft, and find it is 4 ft. wide, composed of splendid gossan.

PEDN-AN-DREA UNITED.—Wm. Tregay, J. Thomas, June 30: The lode in bottom of the sump-shaft produces occasional stones of tin; ground favourable for driving; the sinking of this shaft has drained Skimmer's south lode, enabling us to work in bottom of the 130 on that lode, and this drainage must be effected through the junction of lodes, which junction is approaching the shaft from the westward; this looks well for a large and productive lode at this level. The 130 east, on Skimmer's south lode, is worth 8l. per fm. In the 130 west we are still cross-cutting on the cross-course for the main part of Martin's lode, which we expect to reach in a short time, and as the junction of lodes must at this level be in the neighbourhood of this cross-course, we expect to find it productive. The 130 winze, on Skimmer's south lode, is being sunk on tribute, worth 15l. per fathom. The 120 west is worth 8l. per fm. The 100 east, east of Bragg's cross-course, on Skimmer's south lode, is worth 10l. per fm. The 100 east, on copper lode, produces good spots of copper ore; ground very favourable for driving. The lode in the bottom of Cobbler's shaft (wrought on tribute) is worth 18l. per fathom. In the 90 north nothing has been intersected since last reported; much water is still issuing from the end. We sold at Bissoe 9 tons 14 cwts. 0 qr. 11 lbs. of black tin, for 439l. 0s. 10d.

PENHALE WHEAL VOR.—W. Chappell, W. H. Martin, J. Martin, July 5: At Gutierrez's shaft our progress for the last week has been slow, owing to an increase of water cut in the 26 fm. level end west, which has retarded our clearing the shaft below the 26; we are now down 4 fms. below that level. The lode in the 26 fm. level end west is 2 ft. wide, and out of the influence of the cross-course, composed of peach, prian, and stones of tin, with indications of a good improvement in extending this level west about 3 fms., which will then be under the bottoms gone down in the 16, west of the cross-course, where we have good reasons to believe that we shall make a satisfactory discovery. Our tributers are working well, and earning fair wages. We are preparing a parcel of tin for market. Our 60-in. pumping-engine and steam-stamps, with all the pitwork, are in thorough repair, and working well.

PENHALLS.—Wm. Higgins, June 30: The only thing new that has occurred during the week is the discovery of a branch on the western side of the 50 cross-cut, south on cross-course, which is about 6 in. wide, and will pay for working on when the cross-cut is further advanced. The tutworkman and tributers have been desuing the lode.

PRINCE OF WALES.—W. Gifford, July 3: We shall be ready by to-morrow for the engineer to put in the engine, and hope to have it erected with all possible speed.

REDMOOR.—Thos. Taylor, July 3: In our eastern end we have intersected a branch about 1 ft. wide, of spar and white iron, and spotted throughout with rich silver-lead ore; we have not turned on its course, but are still driving east. The lode in the end is about 18 in. wide, producing a deal of mundic and some good stones of silver-lead ore. In the end north the ground is now a little more settled. No other change.

REINNE LAXEY.—R. Rowe, July 4: I was at this mine yesterday. In the deep adit level the lode is without change. In the 20, driving north of the engine-shaft, the lode is 3 feet wide, with occasional stones of ore, but nothing steady. We have a parallel lode at this level, about 3 fms. to the east, carrying branches of lead, and which will form a junction with the main lode northwards, and at no great distance it is only reasonable to expect, and I look for, a favourable change at this point.

ROARING WATER.—F. Thomas, July 3: There is a considerable increase of water in Gilliman's engine-shaft, the ground is precisely of the same character as for some time passed, and since the air-machine has been fixed a sufficient amount of ventilation has been secured. The shaft is divided, cased, and ladder-road put into the bottom of the shaft. No lode has been taken down in Grady's engine-shaft since last week, but we intend doing so in the course of this week. The machinery is in good working order.

ROSECLIFFE AND TOLCARNE.—R. Pryor, J. Phillips, July 4: The ground in Lindo's engine-shaft, below the 30, continues favourable for sinking, and the men making good progress; this point is being pushed on with all possible speed in order to reach the 40. The lode in the 30, east of engine-shaft, on No. 1 lode, is 2½ feet wide, and producing splendid stones of silver-lead, and judging from present appearances we think a change for the better will shortly take place. No change of importance has taken place in No. 2 lode during the past week. In the 30 cross-cut, north of shaft, the ground is still good for driving, and more water oozing therefrom.

ROSEWALL HILL AND RANSOM UNITED.—R. J. Trweeke, July 4: The lode in the 100 fm. level end, east of Ransom's, is worth 10l. per fm. The lode in the stope in the back of this level is worth 10l. per fm. The lode in the 90 east is worth 9l. per fm. The lode in the stopes in the back of this level is worth 10l. per fm., and in the bottom 14l. per fm. The lode in the winze just commenced sinking below this level, about 12 fms. behind the end, is worth 20l. per fathom. The lode in the 85 east is worth 11l. per fm. The lode in the stopes in the back of this level is worth 9l. per fm.—Engine-shaft: The lode in the bottom of the 170, east of this shaft, is worth 25l. per fm. No other change to notice.

ROSEWARNE CONSOLS.—John Nancarrow, Richard Huckey, July 2: The lode in Ellen's shaft is 2 feet wide, composed chiefly of quartz, and the ground is harder for sinking. There is in the 90 east a very promising lode, but nothing yet to value. The 80 east, on the north part, does not yield much ore. The stopes in the back of the 80 east, on the south part, are worth 5l. and 6l. per fm. In the 20, west of Ellen's, we have a branch come in from the south, and the lode has a better appearance. The lode in the 80, west of engine-shaft, is split, but looks well, and yields good stones of ore. The lode in the 70 west is 14 in. wide, and looks very kindly, but there is nothing to value. The pitches look just as they did at the setting, and the men are working regularly.

ROSEWARNE UNITED.—T. Richards and Son, E. Carthew, Wm. Temby, July 5: The 80 is driven 12 fms. west of the engine-shaft; the lode is 18 in. wide, containing good stones of black copper ore. The 70, west of the engine-shaft, is worth 14l. per fm. The stope in the back of the 70 west is worth from 20l. to 25l. per fm. The 60, west of engine-shaft, is worth 5l. per fm.

SILVER VEIN.—E. Burn, July 4: We have a little improvement in the lode in the shaft. We are breaking some very good stones of yellow and grey ore, intermixed with lead. In my opinion it is very rich, both for copper and silver. The shaft is looking more kindly than ever it has been. The ground throughout is impregnated with mundic and green carbonate of copper. A small box of the ore you can have if you desire it.

SORTRIDGE CONSOLS.—J. Richards, July 5: In Hitchins's engine-shaft (which is temporarily suspended, to admit of the casing and dividings being brought down to bottom) the ground is both congenial for the production of mineral and favourable for progress; sinking will be hastened on.

SOUTH CALLINGTON.—William Spargo, July 5: There is no change in the ground at the new shaft since my last, but I would advise to sink the shaft another 4 ft., and then cut through the lode, as, judging from the different branches we have sunk through, which have produced lead, and have fallen into the lode, I should judge that there is not the least doubt when the lode is cut through but that it will be found productive.

SOUTH CONDURROW.—J. Vivian and Son, Wm. Williams, June 30: West Basset Lode: King's shaft is now 6 feet below the 51, where the lode is 3½ feet wide, composed of ferruginous quartz, with pockets of black copper ore. A branch or dropper from the north will fall into the lode in sinking about 2 fms., and may probably produce a favourable effect. In the 51 east we have cut through the lode, and find it 3½ ft. wide, composed of ferruginous quartz, with pockets of black copper ore and spots of grey copper ore, having altogether a favourable appearance. In the 51 west the lode is 1½ ft. wide, increasing in size, and producing throughout tolerably large lumps of black and grey copper ore. In the 40 west the lode is 4 ft. wide, a part of it, about 2 ft. wide, being grian and soft quartz, in which occur frequently lumps of black and grey copper ore of good size; there is also more water than we have before had issuing from the lode, its appearance altogether being highly favourable. In the 30 west we have passed through a knot of ore 2 fms. in length since last reported, worth 10l. per fathom, and altogether the lode has since become small; it is again opening and promising to improve. The winze from the 30 to the 40, west of King's shaft, has been communicated, and we are now stoping the ore ground through which it has passed. Vivian's shaft has been completed to the 20, and we shall now proceed to sink it to the 30, whilst at the same time resuming the driving of the 20 west, there being a lode of favourable appearance, 2 ft. wide, in the end. In the 20 east the lode has increased in size, being now 1½ foot wide, and improved in character, having apparently passed through the hard rock in which it has lately been.—Middle Lode: In the 20, east of cross-cut, east of engine-shaft, the lode is 1½ ft. wide, and producing tin which will more than pay for driving. In the 10 east the lode is 2 ft. wide, producing tin throughout, and good stones of grey copper ore.

SHROPSHIRE MINING COMPANY.—J. Kitto: Since my last report all operations, both underground and at surface, have satisfactorily progressed, and the prospects for the future, I am glad to say, were never more encouraging than at the present moment. The west sump, sinking below the adit level, is now down about 12 fms., and next week we shall commence to drive both east and west from the bottom, where the lode is worth about 2 tons of ore per fathom. The east sump in same level has improved within the last few days, and, I think, never looked so well as at the present time. The lode in the engine-shaft is about 2 feet wide, producing good stones of ore occasionally, but not sufficient to value. The sinking is going on well. We have cleared the old shaft, on the north and south lode, to the bottom, and also cleared out the level. The shaft is sunk about 20 fms. from surface, and the level driven about 10 fms. south from the shaft, but nothing has been done north. The lode, both in shaft and level, will average full 6 feet in width, and is of a very promising character. In the end of the level, as well as at several other places, some rich ore is to be seen, but as we have only now cleared out the level, nothing has yet been done on it. We shall, however, commence to drive on it immediately, both north and south, and shall soon be able to report fully on its character and value. There is no change to notice in any other place. The masons are getting on well with the building of engine-house, &c.

SOUTH DARREN.—J. Boundy, June 30: Setting Report: The 70 to drive west, by four men, at 8l. per fm.; the lode is 2 ft. wide, containing a little lead and copper ore, its appearance being favourable for improvement. The 60 to drive west, by six men, at 8l. per fm.; the lode is 20 in. wide, containing a mixture of lead and copper ore; valued at 10l. per fm., and presents a favourable appearance. To stope the back over this level, by four men, at 75s. per fm.; the lode is 2 ft. wide, valued at 8l. per fathom. The 50 to drive west, by six men, at 8l. 10s. per fm.; the lode is 2 ft. wide, worth for lead and copper ore 12l. per fm., and from its appearance I anticipate an early improvement. To stope the back over this level, by ten men, at 80s. per fm.; the lode is 3 ft. wide, worth for lead and copper ore 18l. per fm. The 40 to drive west, by six men, at 9l. per fathom; the lode is 2½ ft. wide, worth for lead and copper 16l. per fm.; this is a very promising looking level. To stope the back over this level, west from the winze, by six men, at 80s. per fm.; the lode is 2½ ft. wide, worth for lead and copper 14l. per fm. To stope the back over this level, east from the winze, by four men, at 75s. per fm.; the lode is 2 ft. wide, worth for lead and copper ore 12l. per fm. We shall commence sinking a winze in the bottom of this level to meet the 50, driving west, at once. The 30 to drive west, by four men, at 8l. per fm.; the lode at this point is 20 in. wide, producing a little lead and copper, and improving in appearance. To stope the back over this level, by four men, at 75s. per fm.; the lode is 2 ft. wide, worth for lead and copper 9l. per fathom. The 20 to drive west, by four men, at 8l. per fm.; the lode is 2 ft. wide, containing spots of copper and lead, but not enough to value. The shallow level to drive east, by two men, at 6l. 10s. per fm.; the lode at this point at present is small, containing spots of copper, sulphur, &c., but not to value. All other things are going on satisfactorily.

SOUTH DOLCOATH.—Wm. Roberts, July 4: The lode in the 56, west of the cross-cut, continues 1 foot wide, chiefly spar, but nothing in it yet to value. In the same level east the lode is 1½ foot wide, producing nearly 1 ton of ore per fathom. In the 46 west the lode is disordered by a small cross-course; in the same level east the lode is 1 foot wide, producing good stones of ore. In other parts no alteration to notice since last reported.

SOUTH LOVELL.—Wm. Chappell, July 5: The lode in the 12 end, west of engine-shaft, maintains its former size, 2 ft. wide, composed of peach, prian, quartz, and good stones of tin, with an increased quantity of water issuing from the lode as we get back towards the great cross-course, to the west of which the ancient workers raised a great quantity of tin from the adit level to surface. All other points of operation without change to notice.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, June 30: Setting Report: The engine-shaft to sink below the adit, by nine men, at 22l. per fathom; the shaft for 3 ft. wide is mixed with branches of spar and prian, and during the last 3 ft. sinking the lode has been getting more defined.

SOUTH WHEAL TOLGUS.—July 4: Youren's Lode: We have holed the rise from the back of the 150 west to the winze sunk from the bottom of the 140, which has given us good ventilation for driving the level, and for working the backs on tributes. We have set the 150 to drive west by three men and three boys, at 5l. per fm.; the lode in the end is 18 in. wide, producing 1 ton of ore per fm., worth 5l. per fm. In the 110 west (Youren's pitch) the men persisted against our putting any more men with them in the pitch, and would not allow us to do so. They have now given up the pitch, and we have put three men and three boys to drive the 110 west, at 2l. 5s. per fm., and 2s. in 1l.; the lode is producing 1½ ton of ore per fm., worth 7l. per ton. We have also put three men and three boys, to stope the back, at 2l. 5s. per fm., and 2s. in 1l.; lode producing 1 ton of ore per fm., worth 7l. per ton; we have now six men and six boys working this piece of ground instead of four men.—South Lode: In the 150 east the lode is 3½ to 4 ft. wide, and is worth for tin from 30l. to 40l. per fm.; this lode is greatly improved in the last 4 feet that has been taken down; price for driving is 6l. per fm., but this is not a price; at present the ground is a little harder. We have put six men to stope the back of the 150 east, at 4l. per fm.; the lode is worth for tin 15l. to 18l. per fm. Having made a communication in the 150 west by holing the winze to rise, as before stated, we are enabled to turn the draft from the waterfall, that we used for driving the 150 west, to drive and stope the 150 east. We have two stopes in the bottom of the 120, east and west of the rise, working by 12 men, at 3l. per fm. Each stope is producing 3 tons of ore per fathom, worth 4l. per ton; the lode in those stopes is 4 ft. wide, orey throughout. The ground in the 100 cross-cut north is stiff killas.

ST. JUST UNITED.—Capts. R. Pryor, Wearne, and White, July 3: Saveall's Lode: The lode in the engine-shaft, sinking below the 76, is worth 6l. per fm.; a very kindly lode. The lode in the 76, west of shaft, is not looking so well as last reported on, in consequence of meeting with cross heads, which for the time has lessened its value, it now being worth 8l. per fm.; but, judging from present indications, we think it will shortly improve, and reach its former value. The lode in the stope in back of this level is worth 7l. per fm.—Buck Lode: The lode in the 62 east is worth 5l. per fm.—Owl Lode: In the 20 north the lode is worth 9l. per fm.; the lode in the 10 north is worth 8l. per fm. The lode in the adit north within the last week has very much improved, it now being worth 15l. per fm. The lode in the winze sinking below this level is worth 10l. per fm.

TRENCROM.—W. Arthur, July 5: The lode in the 110, east of Hollow's shaft, is split by a horse of granite, producing occasional stones of tin. The lode in the 100, east of Hollow's shaft, is 18 in. wide, worth 6l. per fm. The lode in the 90, east of Hollow's shaft, upon the north part, is 6 in. wide, with stones of tin. The lode in the 80, east of Hollow's shaft, is 12 in. wide, unproductive. We are progressing very favourably in cutting down Dawe's shaft below the 60. The lode in the winze sinking below the 50, west of Dawe's shaft, is 15 in. wide, worth 3l. per fm. The lode in the 50, east of Dawe's shaft, is 15 in. wide, worth 4l. per fm. The lode in the 40, east of Dawe's shaft, on the south part, is 2 feet wide, worth 3l. per fm.

TREVENAN AND TREMENHEERE.—J. Medlyn, C. George, July 4: The lode in the 197, east of Trevenen shaft, yields a little tin, but not to value; this level, going west, is worth 5l. per fathom. The 187, east of this shaft, is worth 15l. per fathom. The winze sinking below this level is worth 10l. per fathom. The lode in the 150 end, east of old sump, on the south lode, is worth 14l. per fathom; this level, going west of the junction, is worth 10l. per fathom. The lode in this level, going west of Pearce's cross-cut, is getting better defined, but rather poor for tin. The 130, west of new sump, is worth 3l. per fathom; the lode in this level, going east of great cross-course, is small and unproductive. We commenced to clear out the 140, east of old sump, yesterday, and hope to drive it to reach the productive ground we have in the level below quickly. We intend to start a cross-cut south in the 162, 20 fathoms east of Trevenen shaft, to-morrow. Here we shall be helped by a small cross-course, where we expect to cut the south lode in 4 fathoms driving.

TREWEATHA.—Thomas Foote, John Scoble, July 3: The lode in the 50 north is 3 ft. wide, and will yield 4 cwts. of lead per fathom. The same will apply to the 50 south. We are getting on with clearing and securing the 40 north and south as fast as we possibly can, but the timber being broken so bad our progress at present is rather slow. We calculate that we are now in the worst part of the levels, and hope to make much better progress shortly. The three stopes in the back of the 40 south will produce as follows:—No. 1, 6 cwts. of lead per fm., and Nos. 2 and 3, 3 cwts. each of lead per fathom. The lode in the 30 south is 3 ft. wide, producing saving work for lead. The stope in back of this level will produce 3 cwts. of lead per fathom. We have communicated the winze in bottom of the 30 north with the rise in back of the 40. The lode in the 20 south is improved, now 2½ ft. wide, worth 5 cwts. of lead per fathom, and ground easy for driving. The lode in the 33, north of footway shaft, is 2 ft. wide, producing good saving work. We are making good progress in this end, the ground being favourable for progress. At surface we have completed our capstan, so as to be able to commence about our pitwork at the north engine-shaft. We have stacked the pole, and shall commence taking up the small lift, so as to enable us to send down main rods, &c., for the plunger-lift in the 30. Dressing and all other work is going on well. No change in any of the tribute pitches.

VIGRA AND CLOGAU.—J. Remfry, July 5: During the week we have daily obtained pieces of quartz, containing speaks of visible gold, from No. 1 shaft. In No. 2 mine the gold still holds down, and we hope shortly to see an improvement. The lode east from No. 3 shaft continues without any alteration. In the west driving the lode has rather improved in appearance; width of lode at present 2½ feet. The lode in the east level from No. 2 shaft is being carried forward by four men. No change to notice. Between Nos. 1 and 2 mines we are costeaning with three men. We have here a mass of quartz, of which we shall be able to speak more after opening a little more on it. The stopes in No. 1 mine are without change. At old Clogau the men are still engaged at the same work as last reported. Three different samples have been passed through the stamps, the blanket sand from which is being amalgamated. Gold received at the office, 10 ozs. 17 dwts. 9 grs.

WELSH (Gold).—William Vincent, July 5: During the past month we have driven 3 fms. 1 ft. in the 8 fm. level on the north and south lode at Cefn Coch; for the last 6 ft. the ground has been somewhat easier to drive. The present price for driving is 6l. 10s. per fathom. There is no alteration in the character of the lode since my last.

WEST BASSET.—William Roberts, July 4: Middle Lode: In the 84, driving east, the lode is 1 foot wide, producing stones of good ore. In the 65 west the lode is small. In the same level east the lode is 3 feet wide, yielding very good stones of ore, and is likely to improve. In the 52 east the lode is 2 feet wide, producing stones of ore.—Engine Lode: The lode in the 144, east of Grenville's shaft, is 1½ foot wide, at present unproductive. In the same level, driving west, the lode is 3 feet wide, producing 3 tons of ore per fathom. In the 134 east the lode is 4 feet wide, producing occasional stones of ore.

WEST CARADON.—W. Johns, June 29: Our pay and setting passed off very satisfactorily, and we set our usual number of tutwork bargains and tribute pitches. There is no particular change in the mine to notice since our report sent you on Tuesday last. Our sampling will be at the usual time.

WEST NANTY.—July 4: Saturday last was our pay and setting-day, and the following bargains were set:—The rise in back of the 10, 8 fms. east of engine-shaft, to six men, at 7l. per fathom: the lode is large here, and will yield about 12 cwts. of lead ore per fathom. We set a stope above the deep adit, 6 fathoms west, west of engine-shaft, to four men, at 2l. per fathom; the lode will yield about 11 cwts. of lead ore per fathom. We have been driving an adit cross-cut at a point about 70 fms. east of engine-shaft, and intersected the lode; it is a strong and kindly lode, producing now and then spots of lead ore. We have set this to four men, at 3l. per fathom. This point has thrown great light on our deep adit. It seems to me now that if we drive our deep adit about 12 fathoms further east we shall get through the broken up ground which disordered the lode, and shall stand a good chance to meet with a bunch of ore. The dressing goes on regularly.

WEST SHARP TOR.—Wm. Richards, July 2: The part of the lode now being cut into in the 150 cross-cut contains capel, quartz, iron, peach, and stones of rich quality copper ore, and we expect a further improvement soon. We have not yet cut through the lode in the No. 5 cross-cut, in the 162 west; the part now being cut into is of much the same character as previously reported on. The lode in the stopes in back of the 162 west continues to 21l. worth of ore per fm. The part of the lode being carried in the 174, east and west of the cross-cut, contains capel, quartz, iron, a little mundic, and some rich quality copper ore occasionally. We have intersected a small oblique branch of quartz and grey copper ore in the cross-cut in the 174 west during the past week, which augurs well for the south part of the lode, but we have not yet cut through the capel part.

WEST WHEAL TOLGUS.—July 4: South Lode: The men are making fair progress in sinking Taylor's engine-shaft below the 85. In the 85 west the lode is 15 inches wide, looking very promising, producing 1 ton of ore per fathom, worth 3l. 15s. per fathom; price for driving, 9l. per fathom. The part of the lode that is being carried in the 85 east is 3½ feet wide, producing 2½ tons of ore per fathom, worth 9l. to 10l. per fathom; price for driving, 8l. per fathom. In the 75 east the lode is 4 feet wide, producing 2 tons of ore per fathom, worth 7l. 10s. per fathom; price for driving, 7l. 7s. per fathom. The lode in the 75 west is 3½ feet wide, producing 2 tons of ore per fathom, worth 8l. per fathom; price for driving, 6l. per fathom. This level is promising for a speedy improvement. The lode in the sump-winze is 2 feet wide, producing 1 ton of ore per fathom, worth about 3l. 10s. per fathom; price for sinking, 15l. per fathom. In the winze sinking below the 75 west the lode is 3 feet wide, producing 2 tons of ore per fathom, worth 3l. 10s. per ton; price for sinking, 12l. per fathom. We have three stopes over the back of the 75 east, and two stopes west of shaft, working by 30 men, at an average of 2l. 16s. per fathom. There is scarcely any difference in the yield or of the value of those stopes, each producing 3 tons of ore per fathom, and worth from 3l. 10s. to 4l. per ton. The lode in the 65 west is 3 feet wide, producing 2½ tons of ore per fathom, worth from 3l. 10s. to 4l. per ton. This level is looking more promising; the price for driving, 6l. In the rise over the back of the 65 west the lode is 15 inches wide, consisting of flookan. The same remarks will apply to the lode in the 50 west. We thought we should communicate the rise to the 50 by the end of this week, but the man who was driving the 50 has been very ill for the last week. The stope over the back of the 65 west is yielding 4 tons of ore per fathom, worth 3l. 10s. ton; price for stoping, 2l. 5s. per fathom.—North Lode: In the 65, east of Taylor's engine-shaft, and east of the cross-cut, the lode is from 20 inches to 2 ft. wide—unproductive.

WHEAL AGAR.—William Roberts, July 4: The lode in the 110, west of Windstow shaft, is 1½ foot wide, producing low-quality tinstuff. In the 100, west of shaft, the lode is small.—Western Shaft: In the 110 east no lode has been taken down since setting-day. In the 100 east the lode is 4 feet wide, all saving work for tin. The lode in the 90 east is 3 feet wide, saving work for tin.—Old Whim-Shaft: A communication is made in the 140 with the level driven west from the winze sunk under the 130, and thereby opened a piece of tribute ground. We shall now begin to drive the 140, east of the said winze, on a very promising lode, 2½ feet wide, in which there are good stones of ore, and saving work for tin. Other operations are progressing satisfactorily.

WHEAL BULLER.—James Inch, July 4: Stevens's shaft, sinking under the 80, is worth for tin 8l. per fathom. The 80, east of this shaft, is worth 12l. per fathom. The rise in back of this level is worth 8l. per fathom. The winze under the 50 is worth 6l. per fathom.—Hocking's Shaft: The 80 west, on the north tin lode, is worth 5l. per fathom. The 70 east is worth 6l. per fathom. The 70 west is worth 12l. per fathom. The 60 west is worth 6l. per fathom. The winze under this level is worth 18l. per fathom.—Buller Lode: In the 80, east of Kistle's shaft, the lode in the end is 5 ft. wide, composed of gossan, and spotted with rich copper ore, a very fine looking lode, but not producing enough to value.

WHEAL CREBOR.—J. Gifford, July 3: Cock's shaft will be sunk to the 120 by the end of this week, when we shall commence cutting plat on the western lode, preparatory to cross-cutting the lode. In the 108 east we have cut through the lode, which is 8 ft. wide, composed of capel, quartz, mundic, and copper ore, yielding saving work for dressing—a very promising end. We have commenced driving by the side of the lode; stent the month at 4l. per fathom. No change to notice in any other part of the mine since last reported. We sampled, on Friday last, two parcels of copper ore, computed 131 tons, and have now 40 tons broken on the mine.

WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, June 30: Setting Report: The 120 to drive west, by four men, at 4l. per fm.; the lode is 3 ft. wide, of gossan, quartz, and prian, which yields a little tin. The rise above this level, by six men, at 4l. 10s. per fathom; lode 3 ft. wide, worth 6l. per fm. The stope above this level, by four men, at 45s. per fm.; lode worth 6l. per fm. The stope above the 110 west, by four men, at 30s. per fm.; lode worth 6l. per fm. The 100 east, by four men, at 10l. 10s. per fm.; lode from 3 to 4 ft. wide, which produces a little tin, but not to value. The stope below this level, by four men, at 4l. per fm.; lode worth 6l. per fm. The stope above this level, by four men, at 42s. per fm.; lode worth 8l. per fm. The 100 west, by four men, at 8l. per fm.; the lode is small. The winze to sink below the 90 east, by four men, at 8l. 10s. per fathom, where we are anticipating a good lode, worth 10l. per fm. Two stopes over this place, by eight men, at 55s. per fm.; lode worth 8l. per fathom. One stope above the 90 east, by four men, at 37s. 6d. per fm.; lode worth 7l. per fathom. Two stopes above the 90, west of shaft, by six men, at 60s. and 30s. per fathom; lode worth 5l. and 6l. per fm. The 90 cross-cut to drive north, by six men, at 8l. 10s. per fm.; here the ground is of much the same character as for some time. The 80 to drive east, by four men, at 5l. per fm.; we have not taken down any lode for the last 3 fms. driving, but which we intend doing shortly. Two stopes above this level, by eight men, at 42s. and 57s. 6d. per fathom; lode worth 7l. per fm. The winze to sink below the 80, west of shaft, by two men, at 90s. per fm.; the lode is 4 ft. wide, worth 7l. per fm. The 66 east, by four men, at 60s. per fm.; the lode is from 3 to 4 ft. wide, worth 5l. per fm. Two stopes above this level, by six men, at 47s. 6d. and 35s. per fm.; the lode is worth 6l. per fathom. The 66 west, by two men, at 10l. per fm.; the lode is 2 ft. wide, of quartz, &c. The boundary shaft to sink below the 22, by six men, at 19l. per fathom; here the ground is of precisely the same character as it was in the air-shaft at East Wheal Grenville, sinking below the 25.

WHEAL KITTY (St. Agnes).—W. Polkinghorne, S. Davey, June 30: In the 82, driving west of Holgate's, no change has taken place during the week.—Pryor's Lode: In the 65, driving west of new shaft, the lode is worth for tin 10l. per fathom. In the 65, driving east of shaft, there is no improvement since our last report. In the 54, driving west of shaft, the lode is 2½ ft. wide, and worth for tin 9l. per fm. In the 54, driving east of shaft, the lode is 3 feet wide, and worth for tin 10l. per fathom. In the 44, driving west of shaft, the lode is worth for tin 10l. per fathom. In the 44, driving east of shaft, the lode is worth for tin 5l. per fathom.

WHEAL NORRIS.—J. Andrews, June 30: Carter's shaft is now down 5½ fms. below the 70, the ground in which is a little stiffer, but is still favourable for sinking. In the 70 east we are into the tin ground. Wednesday last was the first time of seeing any tin in the end; it was then 1 ft. wide, producing good stones of tin, but is now full 2 ft. wide, yielding good stamping work, and improving every foot we drive. In the 57 east we are driving by the side of the lode. The lode in the stope in back of the 57 is from 2 to 2½ ft. wide, yielding at times some good work for tin, but, on the whole, it is rather coarse. In the 45, driving east of cross-cut, no lode has been taken down for the week.

WHEAL SPARNON.—Wm. Tregay, E. Chegwin, June 30: Pulsford's Lode: The lode in the bottom of Jardine's shaft is large, and producing good stones of tin and copper ore. In the stope cutting down this shaft below the 40 the lode is worth 5l. per fm. for tin, and produces good stones of copper ore. The stopes in back of the 60, east and west, are worth respectively 10l. and 15l. per fm. for tin. The new north lode in the rise produces good stones of copper ore, and lets out much water.—Cobalt Lode: In clearing the 60 south we have had to close timber through a run in the level, consequently the progress made has been below the ordinary rate this week. Good progress has been made in building the whim. No other change to report.

WHEAL TRELAWNY.—July 3: We are pushing on the sinking of Smith's engine-shaft with all possible speed below the 196, and no time will be lost to get it down to the 210, as before reported. Since the 196 north has been holed to the winze the driving of this end has been more rapid, and the lode will be taken down against our next setting-day; the same remarks are applicable to the 196, south of shaft. No lode has been taken down. The channel of ground is everything that can be desired for mineral. The 182, north of Chippendale's, is looking pretty well, and is still worth 20l. per fm. We are daily expecting to hole the winze in bottom of the 182 south, and the bottom level coming north from Trelawny's, and we cannot but again repeat it is very important to the mine. Some of our tribute pitches are very much improved, and we shall sample again in good time over 105 tons of Nos. 1 and 2 of silver-lead ores.

IRISH MINING, copper mining particularly, after long depression, seems again to be in the ascendant. Much animation (comparatively speaking, in reference to English mining securities) has prevailed in the Irish share market. The established dividend-paying mines never seriously declined in value, extreme quotations never varying more than ordinary speculative properties usually do. During the week, in consequence of discoveries at the mines, the Carysfort shares have advanced from 5s. or 6s. each to 12s. 6d., and in demand, It seems probable that the predictions of the mining engineers who have reported favourably on these mines will ultimately be realised. Measures are being adopted, we understand, to rework the GURTAVALLIG MINE, one of the WEST CARBERRY series: this mine has been in abeyance from circumstances over which the most far-seeing committee, or the most cautious managements, could have no control—the sudden death of three of three of the largest proprietors; such a calamity would have overwhelmed any kind of enterprise in its early stages. The works already executed, and the discoveries made, have been such as to justify sanguine hopes of the mine equalling in value its neighbour at Berehaven, one of the great copper mining prizes of modern date. We understand the present shareholders purpose to admit a few additional parties to fill the hiatus thus unfortunately created, without, as is usual, demanding any premium, or accepting a shilling beyond the sum requisite to carry out the mine, they at the same time retaining their interest intact. The ROARING WATER MINE is represented as progressing most favourably, and rapidly rising in estimation. The ores from this mine have been of the purple varieties, found in small leaders or strings, and have thus been difficult to separate from the gangue of the lode, hence the low price obtained for the bulk of the ore; the richer parcels obtained a range of prices seldom quoted for English ores, and rivalling those of the best Irish mines. These strings converge and unite as the lode descends, and become very rich. At the EAST HOLYFORD, the most energetic proceedings are about to be commenced, a powerful company being rapidly organised under a well-known, vigorous, and withal fortunate mine director; it is to be hoped he will in this prove as fortunate as in his previous undertakings. There is every reason to anticipate this to be the case, since it is a rule with him not to jump at conclusions with regard to mines, but to calmly weigh the opinions of others, as well as to use his own judgment and great experience. Surveyors have also been making enquiries for mining setts in other parts of Tipperary, Cork, and Kerry; no doubt these counties contains vast riches in their metallic deposits. The sett of the OLD BENDERG MINE, one of the mismanaged Clew Bay series, has been applied for, and will be granted on such terms as will meet the views of capitalists. Recent trials have been most satisfactory: copper ore of rich quality, yellow, black, and peacock varieties, mixed with gossan and mundic, having been found in paying quantities just beneath the sod, in a lode 8 feet wide, the matrix being a beautiful spar. This mine would not have been abandoned but by a blunder, in putting down a shaft 17 fms. on the wrong side of the lode, by which means, of course, the further they sunk the shaft the further they got from the lode, and no cross-cut was put out to intersect it. The

proprietary, being thus disappointed, threw up the concern in disgust, so that now some more judicious or fortunate speculators will reap the advantage of their precipitous decision. The ground is represented as being easy to work: all that is requisite is to clear up the shaft and levels, erect a water-wheel (for which any required power is available), and proceed to work. In the meantime, ore may be raised from the backs of the lodes, as was formerly done in Cornwall ere the mines got deep. It is well known that from such works many of the splendid fortunes of the Williams (of Scorrier), the Lemons, Daniels, Oates, and others, were commenced long before the mines were wrought to great depths: we hold that from such sources we must again look for great prizes, especially when the prices for copper ores are at a low standard. There are but few of the undertakings contemplated but are sufficient to show that now the "course of Irish industry" is mapped out the attention of capitalists is being directed to the proper quarter. We believe the time is not far distant when certain districts of the island will be as actively wrought as Cornwall, Devon, or the Isle of Man.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

PRINCE OF WALES MINE.—This young mine is anxiously watched to see the water in fork, the engine is progressing, and by the end of the month will be at work. Rich parcels of ore have been sold, and the price obtained is, owing to the high produce of the ore, quite an exception. The mine will not be affected by low standards so much as many other mines, and as it is well and economically managed, it will become one of the best m'nes in the two counties.

WEST WHEAL KITTY.—Accounts from Cornwall confidently predict a great future for this property. It is one of the most *bona fide* affairs which have come under our notice.

CHIVERTON AND SOUTH MOUNT UNITED SILVER-LEAD MINES are situated in the parish of Perranzabuloe, Cornwall (the Chiverton district, proverbial for its mineral production, and rich quality of ores). It is surrounded by, and in the direct strike on the east of, East Wheal Rose, which gave to its fortunate proprietors over 300,000*l.* in dividends; also the once rich Old Shepherds Mine, and the Cargoll Mines, now paying dividends, on the west by Wheal Vlow, Great St. George, and Wheal Kitty (St. Agnes); on the north by Wheal Golden and Penhale and Lomax; also the celebrated Carter's Mines, represented to have been recently sold for 125,000*l.*, and on the south by the well known West Chiverton Silver-Lead Mine, which have been for a considerable time, and is now, paying encreased dividends. From the indications it is generally believed that this mine will turn out as fortunate as its rich neighbours.

WHEAL MARY FLORENCE.—The prospects of this young mine are exceedingly good. In driving the deep adit from the western part of the sett, on Smith's lode, several tons of copper ore have been raised and sold, and another parcel is now in the way of dressing, while the present end is not over 12 fathoms from surface, but will, by being driven east, gain backs rapidly, and no doubt open up some valuable ground. A shaft is in course of sinking further east, which will intersect Knowling's lode at about the same depth as the adit is being driven on Smith's lode; and as at this point the distance between the two lodes will be only about 8 or 10 fathoms, the cross-cut will be short, and by continuing the sinking, the same shaft will intersect Smith's lode at about 40 fathoms from surface, the general belief in the neighbourhood of the mine is that, if the shareholders push on the deep adit, and the sinking of Law's shaft, they cannot fail to open up a lasting mine.

EAST SNAEFELL.—Everything that has been said in favour of this mine is likely to prove true. As will be seen by the report, the lode in the 9 fm. level north is 4 ft. wide, carrying a steady rib of lead on the hanging wall, 2 in. wide, and the level south, driven 2 fms., is 3 feet wide, mixed throughout with lead and jack, and presenting a prospect altogether very rare for any mine at this depth. Can anything more encouraging be said for a young mine?

CAPE CORNWALL MINES.—The lodes are improving for copper going westward, as anticipated, and looking well for a bunch of ore by further extension into the killas. In the 70, 80, and 90 fm. levels the lode is full of mundic and copper, and the composition of the lode everything to be desired. The agents are strongly of opinion that a bunch of copper ore will be shortly cut; if so, a great advance must take place in the value of this property.

RATING OF COLLIERIES.—It will be recollected that for some time past Mr. Coulson has been extremely energetic in his opposition to the coal trade, and has successfully prevented an amicable arrangement between the Durham Board of Guardians and the colliery owners. The subjoined statement exhibits the extent to which Mr. Coulson carries his feeling; it shows the difference in the mode of valuing collieries, discussed at the meeting of the Board of Guardians. Mr. Coulson's plan was that adopted by the last Assessment Committee; Messrs. Taylor and Hedley's plan is that proposed to be adopted by the new Assessment Committee:—

MR. COULSON'S PRINCIPLES OF RATING COLLIERIES.

Annual value.	*Rateable value.*
Coal.—The actual rent coal is now let at per ten—36s. for coking coal, and 26s. for household coal.	No deductions for repairs.
Plant.—The annual value or rent a tenant would give for it for the purpose of working the mine.	25 per cent. deductions for repairs, &c.

MESSRS. TAYLOR AND HEDLEY'S PRINCIPLES OF RATING COLLIERIES.

Coal.—Rent from 19s. to 20s. per ten.	A deduction of 25 per cent. from the rent to recoup the corpus and for repairs.
Plant.—6 p. ct. on the structural value.	25 per cent. deduction for repairs.

WYLVA COLLIERY (near Mold).—The Cannel recently discovered at this colliery is of superior quality. The company are now testing the production of crude oil by distillation, in Mr. T. Strange's improved retort, which they have had erected specially on their premises; and up to the present the experiments made have proved very successful and beneficial to the company. No doubt, ere long, extensive oil-works will be set up on the premises, which are most conveniently situated for this purpose.

PROFITABLE GOLD MINING.—At the meeting of the St. John del Rey Mining Company (details of which appeared in last week's Journal), it was mentioned by the Chairman (Mr. John Diston Powles) that upon a capital of 129,000*l.* there had been paid in dividends 756,245*l.* (or 68*l.* 15s. per each 15*l.* share), and that a reserve fund had been accumulated, amounting to 41,506*l.*, after having transferred from that fund to capital 30,743*l.*; the stores at Morro Velho were valued at 39,000*l.*, and there had been an expenditure upon plant, out of profit, of 140,000*l.*, making an aggregate of 1,007,494*l.* The total value of the gold raised was 2,909,480*l.*

CHONTALES—About the 14th inst. the West India mail is due, and is likely to bring important advices relative to this company's property. The share markets generally have been flatter this week, yet Chontales shares keep at about 1¼ prem. A few purchases by investors would at once again show the great scarcity of shares for delivery, and make the price much firmer.

FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY.—As will be seen by the last advices (extracts of whtch appear in another column), the steps recently taken by the board of directors to ensure a more effective and economical development of the company'e property, will, no doubt, be the means of producing, at no distant date, results compatible with their capabil ities. It is admitted on all hands that both the mines, under judicious management, can be made to yield largely remunerative results, and it is to be hoped that with Capt. Tregoning (at Bolivia) and Capt. Edwards (at Frontino), such practical skill will be brought to bear as not only to remedy the faults of the past, but at the same time secure a prosperous future.

THE CREDIT FONCIER AND MOBILIER OF ENGLAND.—With the view of reducing the liability on the shares, giving additional strength to and increasing public confidence in this company, an entire reconstruction is proposed. The shares are to be 10*l.* each, instead of, as at present, 20*l.* shares: to effect this, a complete re-valuation of the whole of the assets has been made, and after making allowance for all liabilities, and for the present extraordinary depreciation in the value of securities, the 1,000,000*l.* of paid-up capital of the company not only remains intact, but a surplus of 400,000*l.* is shown, which it is proposed to transfer to the credit of capital account, by writing up 2*l.* per share on each of the 200,000 shares in the company, which shares will then stand at 7*l.* per share paid up thereon; it is then intended to call up 1*l.* per share upon such shares, making each share 8*l.* paid. The company will then be re-constituted, with a capital of 2,000,000*l.*, in shares of 10*l.* eath, and each one existing share, with 8*l.* so paid, will be exchanged for one share in the re-constituted company, with 8*l.* paid, upon which no further liabilies to calls will exist beyond the sum of 2*l.* per share, of which it is intended to call up 1*l.* per share on Jan. 1, 1867, leaving only 1*l.* per share further liability. In the new company—to be called the Credit Foncier of England (Limited)—several important amendments are prepared to be made.

MANUFACTURE OF IRON.—An invention has been provisionally specified by Mr. W. W. Biggs, of Paris, which has for its object improvements in the manufacture of iron when hematite ores are used, and consists in pulverising the ore, washing away the impurities, and then forming the cleaned ore into lumps, lime or cement being used to produce adhesion. The lumps are broken up, and introduced into the furnace in the usual manner.

STEAM STAMPING.—As a substitute for ordinary stamps, steam-hammers, with an arrangement for lowering the cylinders and valve gear as the stamps wear away by use, are being introduced in America for the crushing of ores and similar materials.

RAILWAY CALLS.—The amount falling due in July is 1,400,523*l.*—making a total of 8,130,301*l.* called during the seven months of 1866.

Vice-Chancellor Kindersley has appointed Mr. Frederick Maynard to be official liquidator of the Cork and Youghal Railway Company.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JULY 6, 1866.

COPPER.	£ s. d.	£ s. d.
Best selected ..p. ton	89 0 0–	—
Tough cake & tile „	86 0 0–	—
Burra Burra .... „	90 0 0–	—
Copper wire....p. lb.	0 11¾–	—
Do. tubes .. „	0 12¼–	—
Sheath. & bolts p. ton	91 0 0–	—
Bottoms ..... „	96 0 0–	—
Old (Exchange).. „	77 0 0–	—

BRASS.	Per lb.
Sheets.....per lb.	9d.– —
Wire ..... „	8¾d.– —
Tubes ..... „	11d.– —
Yellow Metal Sheathing .. p. lb.	8½d.
Sheets ..... „	8½d.

SPELTER.	Per ton.
Foreign.....22	10 0– —
To arrive.....22	10 0– —

ZINC.	
In sheets 30	0 0– —

TIN.	Per ton.
English blocks.....	85 0 0– —
Do., bars (in barrels)	86 0 0– —
Do., refined	88 0 0– —
Banca	78 0 0– —
Straits.....	75 0 0– —

TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 10 0– —
IX Ditto, 1st quality	1 16 0– —
IC Ditto, 2d quality..	1 8 0– —
IX Ditto, 2d quality..	1 14 0– —
IC Coke.....	1 4 0– —
IX Ditto	1 10 0– —
Canada plates, p. ton..	13 10 0– —
Ditto, at works	12 10 0– —

* At the works, 1s. to 1s. 6d. per box less.

IRON.	Per ton.
Bars Welsh, in London	7 2 6– 8 5 0
Ditto, to arrive	7 0 0– 7 5 0
Nail rods	8 5 6– 9 5 0
„ Staffd. in London	8 10 6– 8 17 6
Bars ditto	8 10 6–10 0 0
Hoops ditto	9 10 6–10 10 0
Sheets, single.....10	0 0–11 0 0
Pig No. 1, in Wales ..	4 5 0– 4 10 0
Refined metal, ditto..	4 0 0– 5 0 0
Bars, common ditto..	6 5 0– 6 10 0
Do. merch. Tyne or Tees	7 10 0– —
Do., railway, in Wales	6 0 0– 6 5 0
Do., Swed. in London.	10 10 0–11 0 0
To arrive 11	0 0– —
Pig, No. 1, in Clyde ..	2 15 0– 3 0 0
Do. f.o.b. Tyne or Tees	2 9 6– —
Do. Nos. 3, 4, f.o.b. do.	2 6 6– 2 7 0
Railway chairs	5 10 0– 5 15 0
„ spikes 11	0 0–12 0 0
Indian Charcoal Pigs, in London p. ton..	7 0 0– 7 10 0

STEEL.	Per ton.
Swed., in kegs (rolled)..	13 0 0–14 0 0
„ (hammered)..	15 0 0–16 0 6
Ditto, in faggots	16 0 0–16 10 0
English, spring	19 0 0–23 0 0
QUICKSILVER (p. bottle)	7 0 0– —

LEAD.	Per ton.
English Pig, com. 20	5 0– —
Ditto, ordinary soft..20	15 0– —
Ditto (WB) 22	10 0– —
Ditto, sheet.....21	10 0–21 15 0
Ditto, red lead 23	10 0–24 0 0
Ditto, white 27	0 0–30 0 0
Ditto, patent shot....23	15 0–24 0 0
Spanish.....20	0 0– —

REMARKS.—The intelligence received from the Continent of the continued and increased success of the Prussian arms, and of the great victory just obtained over the Austrians, together with the report of an armistice being sought by the Austrians, and the cession by them of Venetia to France, affords good grounds for hoping that it will not be long ere peace will be again established in Germany, and the horrors of war stayed. It is very desirable that this should be the case, as the means not only of saving many thousand lives, and preventing the destruction of much valuable property, but also because it will tend, in a great measure, to cause an improvement in commercial affairs, which have been so seriously affected by the breaking out of the war. We trust, therefore, that nothing may arise to prevent this very desirable consummation. Still no alteration in the Bank rate of discount has been made, and the high rate of 10 per cent. is thus continued for a most unprecedented time; and until money becomes easier we fear no very great and permanent improvement in business will take place. We think, however, that from the general appearance of affairs a reduction must soon be made. The Metal Market has remained during the past week entirely devoid of animation, although there are signs that should the money market become less stringent an improvement would occur, as numerous orders are doubtless held back, and only such are given out as are decidedly imperative.

COPPER.—No improvement has yet taken place in this metal; still we are of opinion that the lowest point has now been reached, and should peace be established on the Continent, and financial matters become easier, we shall see a much more favourable conditiou of the market, and find prices assuming a much firmer position.

IRON.—At the Quarterly Meeting of Ironmasters, held during the past week, it was determined to adhere to the present fixed prices; the trade is, however, very dull, and very few orders are coming in. Needy makers, in order to keep on their works, are accepting lower rates in some cases, and the general impression is they are working at a loss. The reduced demand for finished iron has greatly diminished the consumption of pigs, so that in many cases deliveries under old contracts will extend for some time into next quarter. In Welsh the demand continues dull, and the few orders which have come to hand are chiefly for the foreign markets; a better feeling, however, is rising, and there is a prospect of trade being more active during the present quarter. The works are kept fairly going on old orders. The exports of railway iron during the past week have not been large, owing to the increase of rates of freight, which merchants are not disposed to give. The foreign trade remains without alteration, but the advices from New York are more favourable, and there are hopes that business with America will soon very much improve, and it is expected that a better business will also soon be done with the East. In Swedish Iron no change has taken place in the market. In Scotch pig-iron there has been considerable fluctuations during the week, the price at one time rising as high as 57s. cash, and then declining to 53s. 9d. cash. The last advices from Glasgow, however, mention an improvement to 55s. cash.

LEAD still continues dull, and the recent decline in prices has not led to an increase of business.

TIN.—The market for English has given way, in consequence of the continued quietness, and sales have been made at 4*l.* to 5*l.* under official quotations. Foreign has also again become weaker, and transactions in Straits are reported at 75*l.* cash. The stock of tin in warehouse in London on June 30 was 2846 tons, against 3439 tons at the same time last year, and the quantity of Straits afloat for Europe is 1000 tons, against 1100 tons same time last year. In Holland the stock of Banca in warrants on June 30 was 113,950 slabs, against 32,600 slabs, and 169,900 slabs remaining over from sale same time last year. Arrived towards next sale 107,650 slabs, against 15,719 slabs same time last year.

SPELTER.—Owing, most probably, to the course of events in Germany, the late advance in this metal has not been maintained, and parcels are now selling on the spot at 22*l.* 10s. The stock in London on June 30 was 5774 tons, being a decrease of only 13 tons during the month.

TIN-PLATES.—The demand continues very moderate.

STEEL and QUICKSILVER without alteration.

BIRMINGHAM, July 6.—Rylands' "Iron Trade Circular" says:—Prices which were ranging yesterday from 5s. to 7s. 6d. under list quotations, are firmer by 2s. 6d. on peace news, and are expected to strengthen between this and Thursday. Quarterly meeting transactions are taking place off the markets and out of brokers' knowledge, which denote more steadiness.

It is just possible that the low price of copper, which so seriously affects the mining interests of Cornwall at the present moment, may work its own cure; for it is quite evident that at the present price the Chili miners and smelters are losing considerably by every ton they send to England; and if orders have not already gone out, they will soon be sent there, to carry on both mining operations and the smelting of regulus on a greatly reduced scale. And if the present price of copper does not nearly pay the costs of working, or of smelting into regulus on the spot the richest ores of Chili, the Australian ores which have for some time past inundated our market, and which are much poorer in produce, must be sent here at a still greater loss both to the miner and importer. In the month of June alone two Australian mines sold, at Swansea, 2670 tons of ore, for 26,164*l.* 2s. 6d.; the highest price realised per ton was 13*l.*, and much of it sold from 5*l.* to 6*l.* per ton, while the expense of raising and preparing the ore for market at the mines, as we are told by one of the companies in the report to their shareholders is 7*l.* 10s. 3d. per ton! When the result of these sales, and the depressed state of trade, become known in Australia, we should think the exports of ores would be materially curtailed; and, with an improving money market, we may surely look with some confidence for a better price for our lessened home produce.

In the Share Market very little change has taken place since our last, but a very large business has been done in Prince of Wales, which seems just now to be one of the leading speculations on the market, and is likely to be so for some considerable time to come. We have called attention to it since the shares were at 1s. 6d. each, but the public never come into a mine when shares are very low; they leave off 17s. to 19s. West Chiverton have been firmer, and more in demand, at 67 to 70. Camborne Vean, 27s. 6d. to 32s. 6d.; Clifford Amalgamated, 5 to 5½; East Caradon declined to 7, but leave off better at 7 to 7¼; the caunter lode at the 100 is not yet of any value; the 90 east is worth 18*l.* per fathom; the ends in the aggregate are worth 101*l.* per fathom. Wheal Buller, 10 to 12; the 80, east of Kistle's shaft, lode 5 feet wide, composed of gossan, and spotted with rich copper ores, and a very fine looking lode. East Basset, 10 to 12; Chontales are flatter, both for cash and account, 3¼ to 3¾. Chiverton Moors have been firmer, at 54 to 5⅝; the 50 fm. level ends and 40 fm. level rise are worth 1 ton of lead per fathom each. Chiverton, 6½ to 6¾; the shaft is worth 4 tons of lead ore per fathom, and Murray's is down to the 100 fm. level. Frontino and Bolivia, 7s. 6d. to 10s.; Great Laxey, 19½ to 20¼; Great North Laxey, 35s. to 40s.; Great Wheal Vor have risen to 19, 20; Marke Valley, 3¾, 4.

South Frances 18 to 20; at the meeting, held on Monday, the accounts showed a loss of 251*l.* 19s. 1d. on the two months' working, and a balance in hand of 101*l.* 2s. 4d. No report is yet given of the unwrought boundary lode given the company by the late decision of the House of Lords, but the manager's opinion will be given without delay. North Treskerby, 2⅛ to 2¾; West Seton, 100 to 110; Wheal Seton, 140 to 150. At East Snaefell levels have been commenced on the course of the lode 9 fms. deep, and driven north 15 ft.; the lode is 4 ft. wide, carrying a steady rib of lead ore on the hanging wall 2 in. wide; south 2 fms., the lode is 3 feet wide, mixed throughout with lead and jack, and presenting a good prospect for the depth. Wheal Grenville became in demand on Friday afternoon, and advanced to 1⅞, 2¼. East Grenville also advanced on Friday to 3, 3¼, then declined, and left off 2⅝ to 2¾.

There has been rather a better feeling in the market for mine shares on the Stock Exchange during the week than for some time past. West Chiverton and Great Wheal Vor shares are especially in demand; and in foreign mines, Del Rey and Chontales shares maintain their position. After the years of depression that mines have experienced, a reaction of some moment may reasonably be looked for on a return of the money-market to a normal condition. West Chiverton, 67 to 69; the mine never looked better. Chiverton, 6¼ to 6¾; the lode in the engine-shaft continues worth 4 tons per fm.; Murray's shaft is down to the 100 fm. level. Chiverton Moor, 5¼ to 5⅝; the lode in the 50 is worth 1 ton per fm., and the rise in the 40 1 ton per fathom. Great Laxey shares are steady, at 20 to 21, ex dividend; the mine continues to look well. Great Wheal Vor shares in good demand, at 20, and shares very scarce. Del Rey shares in demand, and have nearly recovered the 4*l.* dividend, closing 48 to 50, ex dividend, the return by the last mail being very good. Cobre, 11 to 13; Don Pedro, ⅛ to ¼ prem.; Anglo-Brazilian, 1-16 dis. to 1-16 prem.; Scottish Mines, 11-16 to 13-16; Chontales, 1¼ to 1⅜ prem.; Capula Silver, ¾ to 1; Cape Copper flat, at 1⅜ to 2¼ prem., in consequence of the postponement in the declaration of a dividend; Port Phillip, ⅛ to ¼; Frontino and Bolivia, 1 to ¾ dis. The features in the market otherwise are unimportant.

The MARIQUITA MINING COMPANY (Limited) has been successfully launched, more than the requisite number of shares (80,000) having been subscribed for to confirm the provisional contract entered into with the liquidators of the Mariquita and New Granada Mining Company. It may be mentioned that the mines acquired were purchased originally by the late company for 77,088*l.*, and that in six years they returned a nett profit amounting to something like 2000*l.* in excess of the entire purchase-money—in other words, equal to more than 100 per cent. But the political disturbances which resulted abstracted a large proportion of the skilled mining labour for a period of certainly not less than four years, seriously retarding, if not altogether suspending, much of the necessary exploratory works, thus accounting to a very great extent for the cessation of dividends since 1859. Such labour, however, as the company was not deprived of by the military conscription was judiciously employed in the completion of a work—the sinking of the main shaft—imperatively necessary to render the Santa Ana Mine a permanently productive property; the outlay not only exceeded the value of the reduced quantity of ore returned throughout such a disastrious period as that above referred to, but involved the company in a considerable amount of debt, which, it need hardly be said, adversely affected the progress of the late company, and occasioned financial difficulties. The entire re-establishment of tranquillity throughout the country has now enabled the development of the mines to be resumed with full vigour, and they are now yielding a satisfactory monthly profit, which it is confidently believed will be progressive in amount and permanent in character. It has already been stated in the Journal that the directors of the newly-formed company (Messrs. R. A. Routh, A. D. de Pass, J. Field, S. Herapath, E. Mocatta, and A. Schoales) had entered into a provisional agreement with the liquidators of the late company for the purchase of these mines, plant, &c., for 71,544*l.*, of which 57,088*l.* will be payable in 114,176 shares (with 10s. per share credited as paid), and in cash 14,456*l.*, payable by instalments. These shares will be distributed among the shareholders in the old company upon the payment of 5s. per share; while the remaining 10,824—the total number being 125,000 (1*l.*) shares—will be subsequently issued to the public at not less than 10s. per share. The prompt manner in which the shareholders in the defunct company have come forward to save their admittedly valuable property being sacrificed cannot be too highly commended, and it would appear that those of them who have not expressed a willingness to take their proportionate interest in the new company are acting somewhat inexpediently, inasmuch as they not only sacrifice that interest, but remain subject to calls from the liquidators for the discharge of the debts of the old company.

IRISH MINE SHARE MARKET.—The continuance of the Bank of England rate of discount at 10 per cent., to the disappointment of a large number, if not the majority, of our most influential speculators in public securities, has been the means of checking the buoyancy of our Mining Share Market. Most of our financial men believe in a speedy reduction of the official minimum to 8 per cent., but meanwhile, and particularly while daily expecting great and most important changes in the aspect of continental affairs, speculative investments of any kind are made only on a small scale, and with extreme caution. On the other hand, there are always holders to be found who are, financially, too weak to hold out for better times and improved prices, wherefore a slight and gradual reduction in quotations should rather stimulate purchasers than discourage holders of property, which any day on the receipt of favourable news, either from abroad or from the head-quarters of the respective undertakings, may go up many per cent. A strong illustration of this we have shown last week in mentioning the sudden advance of the shares of the Carysfort Mining Company, which rose from 3s. to 11s. within the brief period of a week or ten days. For reasons stated in last week's Journal, that rise suffered a relapse, but at the commencement of this week transactions in these shares received new impetus, and were numerously dealt in at prices varying from 12s. to 14s., for those on which 30s. has been paid up. An apprehension having sprung up that the discovery of two or three new lodes on the company's property, near Arklow, would be considered so promising as to lead the directors to recommend a further provision of capital, a reaction affecting the shares, subject to calls, set in strongly, so that after many dealings, at quotations ranging from 12s. to 10s., they are now on offer again at 9s. 6d. and 9s. The fully, or 2*l.* 10s., paid-up shares have, on the other hand, risen from 17s. 6d. to 20s. per share, and are much sought after at the higher rate. The shareholders of this, the Carysfort Mining Company, held a half-yearly meeting on Monday, of which we intend giving a fuller report next week. From that it will be seen that new board of directors has by the appointment of a *resident* thoroughly practical mining captain adopted a course of action which our Dublin Correspondent urged upon the shareholders on several occasions during the last four or five years, but was viewed with so much disfavour by the former board of directors that we received complaining epistles, sullied by insinuations that our correspondent was actuated by motives of self-interest, which we well knew to be entirely without foundation, and treated accordingly. Next week we shall also give particulars of the balance-sheet sent out by the directors of the Mining Company of Ireland, from which it appears that they have a sum of 7665*l.* applicable to the payment of a proposed dividend of 11 per cent., and that the company's affairs are in a very prosperous condition, considering the almost unprecedented difficulties which all productive mines experienced during the past six months. The company's shares (7*l.* paid) closed last week at 17*l.* to 17s. 10s., but at these prices there was only now and then a stray seller to a small extent, ineffectual enquiries having been repeatedly made at that rate, holders asking 18*l.*, our last week's quotations. Wicklow Copper shares (2*l.* 10s. paid) were slightly affected by the general dulness in our share market. Last week's closing price was about 22*l.* 10s., but they still command 22*l.* 5s. for cash and account. General Mining Company for Ireland shares have also given way, and

after several transactions at 2*l.* 15*s.* are procurable at 2*l.* 12*s.* 6*d.* Connorree shares having been passed over on several days, leave off, sellers, at 16*s.*

Mr. T. S. Cave received his discharge from the Court of Bankruptcy on Tuesday. No opposition was offered, as it was considered that his assistance would be of great advantage to the estate in developing the Cappagh Mine, which is believed to be worth 100,000*l.* Mr. Girdlestone, one of the principal creditors, having fully investigated the case, entirely acquitted the bankrupt of misrepresentation, as he felt that he must have been mistaken with regard to the value of the property.

In the Dublin Court of Exchequer, on Monday, a cause, "Journeaux *v.* Despard," created a great deal of interest. The plaintiff's case was that he assisted in forming a company who purchased from the defendant and others the Victoria Slate Quarries, with all rights and royalties, for 11,000*l.*; stores at Carrick, and a stock of old slates at the quarries, for 600*l.*, and that the company paid 6 per cent. interest half-yearly to the defendant on 5000*l.*, and other items, amounting in all to 13,000*l.* That the company is in a prosperous condition, with capital to develope the rich veins of blue and green slate on their property. That plaintiff was entitled to a commission of 500*l.*, particularly as defendant had received from the company all his demands—4000*l.* in shares, and 550*l.* in cash, although the latter item was not due to him for nine years!—The defendant's case was that he expected, as the plaintiff did not accomplish the above within three months after date of his (defendant's) letter of bargain, that he (defendant) did not consider that the plaintiff had in any way assisted him, and he refused to settle the plaintiff's claim by arbitration, considering that he was not indebted to the plaintiff one shilling.—The counsel for plaintiff said he was justly entitled to 500*l.* for floating the company and selling defendant's property for its full value.—The council for defendant stated that he looked on his brother, Dr. Edward Wright, as his agent, and, consequently, that plaintiff's claim was absurd.—The Judge told the jury that many of defendant's letters proved that he looked on Mr. E. Wright as being unwilling or incompetent to form the company; that he employed Mr. Journeaux to perform various commissions as his agent; that Mr. Journeaux has a just claim for work and labour; that the fact of having read over, and replied to, the sheaf of letters in Court entitles Mr. Journeaux to a verdict, and that it was evident, although Mr. Despard has received in full the value his fondest hopes had set on the property, yet he appears unwilling to pay his agent for assisting him to it.—This case terminated in a verdict for plaintiff for 200*l.* and 6*d.* costs.

MARLEY DEMESNE.—This ancient seat, so long owned by the La Touche family has been purchased in the Landed Estates Court, by Mr. Erwin Harvey Wadge, F.G.S., Chairman of the South Cornwall Mining Company, and to whom the testimonial was presented, as reported in the *Mining Journal* of June 16. The demesne, which is both extensive and picturesque, comprises an area of about 300 acres of finely-wooded park and pleasure-grounds, through which two mountain streams run, expanding into beautiful lakes, covering several acres in extent. The gardens are very extensive, and most tastefully arranged. The demesne is situated on the western slope of the Dublin hills, which form the commencement of the Wicklow mountains. The property, which was officially described as the Marley Demesne, with mansion-house, offices, and the estate, consists of 7 lots in the printed rental; they were set up together. Lot 1 contains 66 statute acres; nett yearly rent, 212*l.* Lot 2—16A. 3R. 35P.; nett rent 43*l.* 13*s.* 1*d.* Lot 3—86A. 3R. 18P.; nett rent 339*l.* 10*s.* 10*d.* Lot 4—1A. 18P.; nett rent 5*l.* Lot 5—39A. 3R. 27P.; nett rent 98*l.* 2*s.* 8*d.* Lot 7—45A. 2R. 14P.; nett rent 148*l.* 2*s.* 6*d.* The estate is held partly in fee farm, and for a long term of years. Mr. Byrne bought the seven lots, in trust for Mr. E. H. Wadge, at 11,500*l.*

At Camborne Ticketing, on Thursday, 2574 tons of ore were sold, realising 10,168*l.* 4*s.* 6*d.* The particulars of the sale were:—Average standard, 100*l.* 12*s.*; average produce, 6⅞; average price per ton, 3*l.* 19*s.*; quantity of fine copper, 171 tons 9 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
May 31	3961	£107 13 0	6¼	£4 4 0	13*s.* 0*d.*	£65 0 6
June 7	1503	105 6 0	6⅜	3 18 6	12 4½	62 2 0
„ 21	3460	108 4 0	6¼	3 19 0	12 7	62 18 0
„ 28	2156	98 16 0	7⅛	4 5 0	12 0	60 0 0
July 5	2574	100 12 0	6⅞	3 19 0	12 0	60 0 0

Compared with last week's sale, the standard is stationary. Compared with the corresponding sale of last month, the decline has been in the standard 6*l.*, and in the price per ton of ore about 7*s.*

At the Cwm Erfin Mine meeting the directors declared a dividend of 1*l.* per share, payable on Wednesday, July 4.

At the Foxdale (Isle of Man) Mines meeting, on June 29, the directors declared their quarterly dividend of 10*s.* per share.

At the Garden Mine meeting, on June 29, the accounts, for the four months ending April showed a credit balance of 20*l.* 2*s.* 5*d.* Capt. John White reported that they have six pitches working by 19 men and 5 boys, at tributes varying from 13*s.* 4*d.* to 18*s.* in 1*l.*

At North Minera Mine meeting, on Wednesday (Mr. H. Emanuel in the chair), the accounts for the six months ending May showed a debit balance of 10*l.* 13*s.* 5*d.* The balance of assets (including plant, 2000*l.*, and unpaid calls 758*l.* 2*s.* 10*d.*) over liabilities was 2817*l.* 6*s.* 6*d.* The cash in hand was 5*l.* 19*s.* 3*d.* Capt. A. W. Thomas reported upon the various points of operation.

At the Great Devon and Bedford (Colcharton) special general meeting, held at the London Tavern, on Monday, it was unanimously resolved that the company be wound-up voluntarily. Mr. Thomas Blake, of Bank Offices, Ross, Herefordshire, was appointed liquidator of the company.

At the North Shepherds Mine meeting, on Monday (Mr. C. Phelps in the chair), the accounts showed a debit balance of 303*l.* 7*s.* 3*d.* A call of 10*s.* per share was made. Details in another column.

At the Prosper United Mine meeting, on Tuesday (Mr. John Kilner in the chair), the accounts showed a nett debit balance of 1924*l.* 13*s.* A call of 10*s.* per share was made. It was unanimously resolved that the operations at the mine be vigorously prosecuted. Details in another column.

At Great Wheal Busy meeting, on Tuesday, a call of 1*l.* per share was made.

At St. Ives Wheal Allen meeting, on June 28, at which the adventurers present and by proxy represented together more than a majority of the shares, all calls made from Aug. 23, 1864, to May 10, 1866, were confirmed. The relinquishment of 87 shares, principally by mine merchants (Messrs. Sam. Higgs and Son, 15 shares; Sandys, Vivian, and Co., 28 shares; and Harvey and Co., 30 shares), were recorded. It being considered advisable that the sinking of the engine-shaft be continued, and that the 40 and 50 fm. levels warrant further exploration, it was resolved that the working of the mine be carried on as recommended by the agents. Capts. J. Nancarrow and J. Daniel reported upon the operations at the mine.

At Carysfort Mining Company meeting, on Monday (Mr. J. P. Baxter in the chair), the report of the directors was submitted, and also that of Capt. Trelease, which states that at the south end of Arklow Beach they have discovered a new lode, as well as two others a little further to the south-west. The No. 1 lode continues in the cutting, with a border of sulphur, varying from 9 to 18 inches wide, which appears to be pretty good, but he is not yet made acquainted with the produce of it. At 70 fms. west from this point good stores of sulphur have been found in the shale of the lode; also about 300 fms. still further west sulphur has been found not more than 3 feet below the surface, and with these and other favourable indications he is very sanguine of ultimate success. The average of the mean results obtained by Profs. Galloway and Sullivan shows the ore to be worth about 25⅞ per cent. for sulphur. Messrs. Tobin and Redmond were re-elected directors, and Mr. Hardy auditor.

At the South Cornwall Mining Company meeting, on June 25 (Mr. E. H. Wadge, F.G.S., in the chair), the report of the directors was adopted. Cleer's Hill and Carthew Tin Mines are to be purchased of Mr. Charles Gibson, for 10,000*l.* Messrs. Rooke, Harvey, Evans, and Rhodes retired by rotation, and did not offer themselves for re-election. Messrs. Robe and Brocklehurst were elected directors. Mr. Charles Warwick, of London, was re-elected auditor. Capt. R. Hancock's report was considered highly favourable. Details will be given in next week's Journal.

At West Great Work Mine meeting, on June 26, the accounts showed a debit balance of 3007*l.* 1*s.* 6*d.* A call of 1*l.* per share was made. Mr. Almond E. Paull, the purser, says—"It may be satisfactory to state that if the present appearances of the mine continue another call will not be required, for there is much reason to expect that the mine will for the future make profitable returns. The report of Capt. Reed on this point has been confirmed by Capts. Gill and Edwin Hosking, who have within the last three or four days carefully inspected the mine."

At South Wheal Frances meeting, on Monday (Mr. R. R. Broad in the chair), the accounts showed a credit balance of 101*l.* The loss on the two months' working was 251*l.* With regard to the eight or nine years of legal proceedings in the boundary case, the committee communicated to the shareholders, in reference to the favourable decision of the House of Lords in the appeal case of the West Basset adventurers, that the draft of the formal judgment of the peers had only been received by Messrs. Smith and Roberts on the previous Saturday, and would have to be considered by the respective parties before finally drawn up. This step would be proceeded with as quickly as possible, in order that the working of the ground confirmed to South Frances by the judgment of the Exchequer Chamber, and the dismissal of the appeal therefrom by the lords, may be commenced. The committee will report progress to the adventurers in due course, and give them the manager's opinion of the unwrought boundary lode at an early day.

The directors of the Cape Copper Mining Company have just issued a circular to the shareholders, which states that, in consequence of the excessive and unusual drought in the Cape Colony, which has prevailed for many months past, only 1500 tons of copper ore have as yet reached this country out of 3550 tons raised during 1865. There is, therefore, so large a quantity to arrive, the assay and probable sale prices of which are difficult to estimate with any accuracy, that the directors have deemed it desirable to defer the closing of the profit and loss account until October, when a considerable proportion of the remaining ore will be realised. The mine at Ookiep continues to be as productive and promising as ever, and the coming season promises to be unusually favourable for the transport of the ores.

From Canada we learn that Mr. Hornby Lewis, of Liverpool, had visited the mines at Ascot, and had expressed a very favourable opinion of them.

The Bank of England return for the week ending on Wednesday evening was again unfavourable, affording fresh evidence of the undesirability of a reduction of the minimum rate of discount. Although the 4th of the month has, on the whole, passed over satisfactorily, the decrease in the "other securities" is quite insignificant, the figures being still 10,000,000*l.* higher than the week before the panic Friday. In the ISSUE DEPARTMENT there is shown a decrease in the notes issued, amounting to the sum of 22,870*l.*, represented by a corresponding decrease in the gold and bullion on the other side of the account. In the BANKING DEPARTMENT there is shown on the liability side a decrease in the "public deposits" of 1,165,080*l.*, and a decrease in the "other deposits" of of 900,143*l.*=2,065,223*l.*, from which must be deducted the increase in the "rest" of 80,866*l.*, and the increase in the "seven day and other bills" of 126,441*l.*; together, 207,307*l.*: leaving a total decrease on the liability side of 1,857,916*l.* On the asset side there is shown a decrease in the "Government securities" of 570,331*l.*, and a decrease in the "other securities of 134,256*l.*=704,587*l.*: leaving a decrease in the total reserve of 1,153,329*l.*

On the Stock Exchange there has been an increased demand for Mining Shares during the week, and prices generally are firmer. The following quotations were officially recorded in British Mining Shares:—East Caradon, 7½; Great Laxey, 20¼; Great Wheal Vor, 19¼, 20¼, 20½, 20, 21¼; Clifford, 5⅛, 5, 5⅛, 5; Devon Great Consols, 432, 437½. In Colonial Mining Shares the prices were:—Cape, 9¼; Port Phillip, ⅝, ¾; Yorke Peninsula, ¼. In Foreign Mining Shares the prices were:—Capula, ⅞; Chontales, 3¾, 4, 3¾; St. John del Rey, 50, 49½, 48½, 47, 48½, 49, 47¾; Alamillos, 1½; Frontino and Bolivia, ½, ⅝, ¾; Don Pedro, ¼ prem.; Cobre, 11.

THE TIN TRADE—DECREASED YIELD OF THE BANCA MINES.—Mr. L. Th. van Houten (Rotterdam, June 30) writes—The tin market has been very strong this month, and, notwithstanding the continued stringency in the money market, and the outbreak of hostilities upon the Continent, the price has steadily advanced. For Banca there has been a good demand; in the beginning of the month some sales took place at 44½ fls., from which the market gradually improved to 45½ fls., buyers. According to Government returns, the total production of tin from the Banca mines amounted to 69,006 peculs in 1865, against 80,958 peculs in 1864, and 95,981 pekuls in 1863. Billiton has been in fair request, but no sales are reported. The position of Banca tin in Holland on June 30, by the official returns of the Dutch Trading Company, was—

	1866.	1865.	1864.
Import in June ..... Slabs	18,793	10,507	14,950
Total six months	125,626	105,019	99,672
Deliveries in June	10,579	5,900	8,928
Total six months	94,655	34,307	42,188
Stock second hand	113,950	201,304	180,271
Unsold stock	107,650	15,719	5,717
Total stock	221,600	217,023	185,988
Quotation, June 30, New terms	46 fl.	54¼ fl.	60¾ fl.

The preceding returns compared with those of 1865 exhibit—An increase of the import for June equal to 261 tons; an increase of the import for the six months equal to 649 tons; an increase of the deliveries for June equal to 147 tons; an increase of the deliveries for six months equal to 1901 tons; a decrease of the stock second hand equal to 2752 tons; an increase of the unsold stock equal to 2896 tons; an increase of the total stock equal to 144 tons; and a decline in the quotation equal to 13*l.* 15*s.* per ton. The Government returns for the month of April are as follows:—

EXPORT OF TIN.	April.			Four months.		
	1866.	1865.	1864.	1866.	1865.	1864.
Germany .. Tons	254	102	114	808	468	400
Belgium	52	24	27	194	122	116
England	108	9	30	170	59	137
France	247	26	28	444	186	92
Hamburg	27	10	22	108	28	32
United States	13	—	3	139	26	18
Other counties	91	16	7	128	28	26
Total	792	187	231	1991	907	821

According to the official returns, the import of tin for consumption in France has been—

	April.			Four months.		
	1866.	1865.	1864.	1866.	1865.	1864.
England .. Tons	244	256	361	633	997	705
Belgium	15	—	15	17	—	70
Holland	120	53	45	478	222	231
Other countries	—	49	25	67	288	196
Total	379	358	446	1195	1507	1202

THE TIN TRADE.—Messrs. Von Dadelszen and North (July 5) write—We note two important features in the market—one, several large arrivals of Straits from America, with a probability of further shipments; the other, large arrivals of Banca in Holland towards the autumn sale, amounting already to 108,000 slabs. On the other hand, the accounts from Penang and Singapore report prices much above those ruling here, and decreased shipments during the last two months.

THE COPPER TRADE.—Mr. J. Pitcairn-Campbell (Liverpool, June 29) reports—The depression advised in our last has been further developed during the fortnight, and quotations of the raw material must again be considerably reduced. At the Swansea sale on June 26 the standard fell 7*l.*, the average unitage being only 13*s.* 5*d.*—lower than it has been since 1848. The value of Chili ores and regulus is 14*s.* to 14*s.* 6*d.*; bars, 77*l.* to 78*s.*; ingots, 82*l.*; and Barilla, nominally, 16*s.* Stocks of copper produce (Chilian and Bolivian) in first and second hands likely to be available—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	2350	3299	1968	446	25
Swansea	9187	5781	1357	413	—

Sales since our last have been—

June 16...160 tons Barilla, to arrive, per Bolivar	£ 0 17	0 per unit.
June 16...151 tons regulus, at Swansea, ex Tarapaca	0 14	9 per unit.
June 16... 29 tons bars, at Swansea, ex M. A. Holman	78 0	0 per ton.
June 16... 99 tons bars, at Swansea, ex Hawkeye	78 0	0 per ton.
June 16... 6 tons bars, at Swansea, ex St. Bernard	78 10	0 per ton.
June 16...145 tons bars, at Swansea, ex Mohican	78 10	0 per ton.
June 16... 36 tons Urmeneta ingots, ex M. A. Holman	83 0	0 per ton.
June 16...113 tons Urmeneta ingots, at Swansea, ex Hawkeye	83 0	0 per ton.
June 16... 22 tons Urmeneta ingots, at Swansea, ex Stranger	83 0	0 per ton.
June 16... 28 tons Cousino Lota, at Swansea, ex Mohican	82 0	0 per ton.
June 16... 4 tons bars, on spot here, ex T. S. Stowe	78 10	0 per ton.
June 16... 82 tons bars, on spot here, ex Maipu	78 10	0 per ton.
June 16... 6 tons bars, on spot here, ex San Lorenzo	78 0	0 per ton.
June 18... 80 tons Barilla, at Swansea	0 17	0 per unit.
June 20...425 tons regulus, at Swansea, ex Coquimbo	0 14	6 per unit.
June 20...715 tons regulus, at Swansea, ex Attosa	0 14	6 per unit.
June 20...410 tons regulus, on spot here, ex Calabar	0 14	6 per unit.
June 22...410 tons ore, on spot here, ex Chiloe	0 14	6 per unit.
June 22... 90 tons ore, on spot here, ex Chiloe	0 14	6 per unit.
June 27...690 tons regulus, on spot here, ex Sebastian Cabot	0 14	6 per unit.
June 27... 50 tons bars, out of second hands	78 0	0 per ton.
June 28... 44 tons bars, at Swansea	77 10	0 per ton.

Arrivals from the West Coast, S.A.—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Inca, Tome	—	—	47	—	—
M. M. Jones, Capudo	—	—	350	—	—
Bolivar, Colon	—	—	—	—	165
Magellan, Callao	—	250	—	—	—
Annie Worral, Tongoy	400	—	—	—	—
At Swansea—					
William Turner, Chanaral	680	—	—	—	—
Vencedora, Bolivia	600	78	—	—	—
Anne Wood, Tongoy	—	457 / 182	—	—	—
Jantha, Tototalillo	—	430	173	—	—
Black Watch, Taltal	671	—	50	—	—
Colorado, Carrizal	—	—	538	205	—
Pembroke Castle, Tongoy	—	—	395	208	—

THE COPPER TRADE.—Messrs. Vivian and Younger (July 5) write—There is a somewhat firmer feeling in the article, and opinions are expressed that with peace and cheaper money we shall see a decided improvement. This will doubtless be the case if consumers are encouraged to buy, and retain average stocks. Meantime general business in the article has been very limited. It is difficult to quote close prices. The available stock of bars, ores, regulus, and English in Liverpol, Swansea, London, and Havre on the 1st inst. is thus estimated—in fine copper, July 1, 1866, 19,845 tons, against 15,760 tons in July 1, 1865; and July 1, 1864, 13,850 tons.

A COLLIERY MANAGER AND ENGINE-DRIVER COMMITTED FOR MANSLAUGHTER.—An adjourned inquest was held at the Anchor Inn, Coleford, on Saturday, touching the death of George Steeds and William Moore, who were killed in an old shaft connected with the Newbury Colliery, by a fall of rubbish. Evidence showed there had been neglect on the part of the engine-driver and manager, and the jury returned a verdict of manslaughter against them. Both were committed to take their trial at the Somerset Assizes.

AMALGAMATION WITH CHLORIDE OF SODIUM.—The machinery used by Mr. J. K. Wyckoff for his patented chloride of sodium process consists of a wooden cylinder—like the old Indian tree-cradle, that many Californian readers will remember—and a shaking table, with the ordinary mechanical appliances for working them. The process is as follows:—200 lbs. of finely crushed ore is put into the cylinder or amalgamator, with about 100 lbs. of mercury and 60 gallons of water, to which 3 per cent. of salt is added. The cylinder is then set in motion, rocking backward and forward. Steam is now let in through a pipe, and in about eight minutes the water boils, and the mercury permeates the entire mass. Forty minutes having elapsed, a stream of cold water is let in, which suddenly cools the mass, and precipitates the mercury. The gate at the end of the cylinder is then opened and a stream of water run through the cylinder, until it comes clear, when the gate is closed and a new charge is put in—the mercury still remaining in the cylinder. The shaking table at the end of the cylinder is simply to work the debris, and retain whatever mercury may come over with it—which is found to be very trifling. It is claimed that the results produced by this process of amalgamation are wonderful—many of the refractory ores of Colorado, California, Virginia, and North Carolina have been worked and made to produce from $100 to $1300 per ton; that such results as are afforded by this process cannot be produced by any other, and that in many instances the tailings of other processes have been thus worked by him and made to yield astonishing results. We all know that particles of gold, when fine enough, will float in water and even in the air, and that much of it is lost by the old processes. All this waste Mr. Wyckoff declares he can obviate by his chloride of sodium plan of amalgamation. The same gentleman has also invented an improved concentrator, which is likewise described in the *American Journal of Mining*. The tailings are simply fed upon an apron, on which some fifty jets of water flow, washing the sand down into the first row of boxes, where the heavy sulphurets are caught. Of course, when the boxes are all full the richest concentration will be found in the upper boxes. The table shakes sideways instead of lengthways, as in many other concentrators. The patentee informs us that thousands of tons of tailings have been worked by this machine—all showing perfect concentration. Lower concentrations can be made by taking up the first three boxes and running the tailings into two, or by turning the two into one, which will give the lowest—excellent, as has been proved, for working good gold ores. The debris, of course, flows off, and only valuable matter is left behind. It is also useful in separating free gold, silver, copper, &c., from one another—the metals with the highest specific gravity being caught first, and so on.

COAL MARKET.—The fresh arrivals this week only amounted to 91 ships. The supply of house coal continues inadequate to the demand, and we have to report a further rise in prices of fully 6d. per ton. Hartley's have been in steady request, without change in value. Hetton Wallsend, 20s.; Haswell Wallsend, 19s. 9d.; South Hetton Wallsend, 19. 9d.; Hartlepool Wallsend, 19s. 6d.; East Hartlepool, 19s. 6d.; Eden Main, 18s.; New Belmont Wallsend, 18s.; Hetton Lyons Wallsend, 16s. 9d.; Kelloe Wallsend, 18s.: 4 cargoes unsold; 30 ships at sea.

THE COAL TRADE.—Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports and exports of coal into and from the port and district of London, by sea, railway, and canal during June, 1866:—

IMPORTS.

BY SEA.			BY RAILWAY AND CANAL.	
Newcastle .... Ships	194	110,620		Tons.
Seaham	33	9,307	London and North-Western	73,843 12
Sunderland	111	50,133	Great Northern	58,846 0
Middlesboro'	12	4,159	Great Western	52,261 0
Hartlepool	127	39,281	Midland	11,832 3
Blyth	1	272	Great Eastern	23,098 1
Scotch	13	3,088	South-Western	3,549 16
Welsh	19	6,647	London, Chatham, and Dover	1,184 2
Yorkshire	17	2,671	South-Eastern	701 10
Small coal	2	1,605	Grand Junction Canal	1,003 15
Cinders	7	1,238		
Total	541	229,021	Total	231,319 19
June, 1865	619	239,021	June, 1865	205,180 13

COMPARATIVE STATEMENT—1865 AND 1866.

BY SEA.	Ships.	Tons.	BY RAILWAY AND CANAL.	Tons.
Jan. 1 to June 30, 1865	4099	1,628,984	Jan. 1 to June 30, 1866	1,418,686 18
Jan. 1 to June 30, 1866	3581	1,488,973	Jan. 1 to June 30, 1865	1,337,724 3
Decrease present year	518	140,011	Increase present year	80,962 15

EXPORTS.

Export List, showing the distribution of coal imported into the port or district of London, by sea, rail, and canal, and afterwards exported coastwise or to foreign parts, or sent beyond the limits of the London district, by rail or inland navigation, during June, 1866:—

Railway-borne coal passing "in transitu" through district	Tons	20,629
Sea-borne coal exported to British possessions or to foreign parts, or to the coast	Tons	15,688
Ditto, sent beyond limits by railway		5,244
Ditto, by canal and inland navigation		4,758=24,810
Railway-borne coal exported to the British possessions or to foreign parts, or to the coast		3,954
Ditto, by canal and inland navigation		278=4,232
Sea-borne coal brought into port, and exported in same ships		1,633
Total quantity of coal conveyed beyond limits of coal duty district during June, 1866		51,004
Ditto, June, 1865		58,203

LEAD ORES.

Date.	Mines.	Tons.	Amount.	Purchasers.
June 20	Stiperstones	6	£16 10 0	
29	Isle of Man Mining Co.	100	22 16 0	Sims, Williams, & Co.
July 4	Stiperstones	50	11 17 6	Burry Port Co.
30	Clara United	15	11 3 0	Sims, Willyams, & Co.
	Bronfloyd United	42	12 10 0	Burry Port Co.

BLENDE.

Date.	Mines.	Tons.	Amount.	Purchasers.
June 26	Great Laxey	100	£ 3 10 0	Attwood's Executors.
30	ditto	300	3 10 6	Vivian and Sons.

BLACK TIN.

Date.	Mines.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchasers.
June 30	Great Wh. Busy	22 18 0 27	—	£ 898 1 2	—
	Pedn-an-drea	9 14 0 11	—	439 0 10	Bissoe.
	Prosper United	10 1 1 21	£44 10 0	448 4 0	Chyandour.
	ditto	0 9 3 1	28 0 0	13 13 0	ditto

COPPER ORES.

Sampled June 20, and sold at Tyack's Hotel, Camborne, July 5.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Clifford Amalgam	101	£4 7 6	Wheal Basset	51	£4 12 6
ditto	100	2 4 0	ditto	41	4 12 6
ditto	95	2 13 6	ditto	35	8 7 0
ditto	93	3 9 6	ditto	30	2 18 6
ditto	91	2 6 0	ditto	29	4 8 6
ditto	90	2 5 0	East Pool	82	2 14 6
ditto	87	2 15 6	ditto	71	3 12 0
ditto	76	7 17 6	South Frances	59	4 0 6
ditto	60	7 5 0	ditto	29	4 13 6
ditto	30	2 7 6	ditto	25	8 12 6
Consols	57	6 15 0	ditto	21	2 7 0
West Wheal Seton	79	1 18 6	Tolcarne	60	4 0 6
ditto	62	6 4 0	ditto	44	3 9 0
ditto	61	4 10 6	ditto	11	1 4 0
ditto	60	6 7 0	North Roskear	83	5 1 6
ditto	59	1 17 0	ditto	28	0 18 0
ditto	58	5 17 0	South Tolgus	45	2 9 0
ditto	56	2 18 0	ditto	40	6 18 0
ditto	44	5 11 6	South Condurrow	57	3 2 0
Carn Camborne	73	1 1 6	ditto	13	4 15 6
ditto	71	3 0 6	North Grambler	36	4 3 6
ditto	70	4 10 6	ditto	6	8 7 0
ditto	65	4 2 6	West Stray Park	16	4 2 6
ditto	12	0 17 0	Crane	12	4 8 6

TOTAL PRODUCE.

Clifford Amalgam	880	£338! 18 0	North Roskear	111	£ 446 8 6
West Seton	479	2049 13 0	South Tolgus	85	386 5 0
Carn Camborne	291	388 6 6	South Condurrow	70	238 15 6
Wheal Basset	186	933 16 6	North Grambler	42	200 8 0
East Pool	153	479 1 0	West Stray Park	16	66 0 0
South Frances	134	638 6 0	Crane	12	53 2 0
Tolcarne	115	406 10 0			

Average Standard ..... £100 12 0 | Average Produce 6⅞
Average Price per ton £3 19 0
Quantity of Ore ..... 2574 tons | Quantity of Fine Copper, 171 tons 9 cwts.
Amount of Money £10,168 4 6

LAST SALE.—Average Standard ..... £ 98 16 0.—Average Produce 7⅛
Standard of corresponding sale last month, £107 13 0—Produce, 6½.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	508½	£2165 10 2
Freeman and Co.	224	1184 1 6
Grenfell and Sons	283	1506 16 10
Sims, Willyams, and Co.	324	1039 3 6
Williams, Foster, and Co.	572⅞	2392 17 2
Mason and Elkington	28	104 8 0
Bankart and Sons	11	13 4 0
Copper Miners' Company	119	514 0 0
Charles Lambert	221	689 11 4
Sweetland, Tuttle, and Co.	211	531 12 0
Total	2574	£10,168 4 6

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday next.—Mines and parcels.—Prosper United 291—East Carn Brea 221—West Basset 204—Botallack 188—Wheal Margery 188—East Rosewarne 153—Copper Hill 95—Camborne Vean 64—North Basset 58—Bampfylde 54—Wheal Curtis 49—Pendeen Consols 43—Wh. Buller 26—Bugelhole's Ore 14—New Rosewarne 4.—Total, 1652 tons.

Copper ores for sale at the Royal Hotel, Truro, on Thursday week.—Mines and parcels.—Devon Great Consols 1829—Hingston Down 600—New Wh. Martha 559—Marke Valley 437—Okel Tor 320—East Caradon 315—Devon and Cornwall 300—Wheal Friendship 221—Wheal Emma 147—East Russell 140—Wheal Crebor 131—Bedford United 118—New Cornish 70—Gunnislake 69—Lady Bertha 54—Fursdon 19—Total, 5329 tons.

PARTICULARS OF COPPER ORES SOLD IN CORNWALL IN THE QUARTER ENDING JUNE 30, 1866.

Copper ores, 35,166 tons (21 cwts.)—Fine copper, 2194 tons 18 cwts.—Amount of money, £145,455 19*s.* 6*d.*—Average produce, 6¼.—Average standard, £110 7*s.*—Average price (per 21 cwts.) £4 2*s.* 6*d.*

WATSON AND CUELL'S MINING CIRCULAR.

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON AND CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and the state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON and CUELL have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON and CUELL they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are also daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

CHONTALES—"BULLS" AND "BEARS."—We cannot allow the remarks, or rather advertisement, of a correspondent in the *Mining Journal* of last week to pass without the explanation, that although they commenced in the style, "We think it our duty," &c., leading many people to suppose that they were editorial, they merely expressed the opinion of an individual having, as he has himself more than once informed us, heavy share operations open in the market. He has, of course, as much right to support his own opinion as we have to support ours; but we protest against anyone who has ten times the interest in keeping a thing up that we can possibly have in keeping it down, assuming a virtuous and disinterested style, and accusing *us* of writing for our own purposes!

"A BULL."—Our impression was, but we are not certain about it, that the machinery to go to work in August referred to that being made on the mine, and not to that sent from England, and to convey which to the mines roads had to be made through a mountainous country. The report of Captain Paul led us to infer that no gold could be sent over before November, if so soon, and this opinion, which we publicly expressed at the time, has given rise to all subsequent statements, placing us in the category of "bears." On April 3 Capt. Paul wrote "We have now no mills at work, the native ones are in such bad condition; I hope, therefore, the *non-arrival of gold* for *some time* will not disappoint you. We must be prepared to do a *vast deal of work* during *the following winter*, which will more than compensate for the little we should be able to do with the old native machinery." Again, "The mills are idle, being in bad condition, though there is sufficient water to grind with good machinery, and *which will be largely increased in the winter*." These words are from the official report, published in the Journal, and dated April 3; and the question is, have we interpreted them wrongly? The mines, we believe, are north of the line, and the seasons, therefore, not very much at variance with our own. If by winter he meant the wet season, when would that set in? Mr. Paul's later reports, up to May 14, stated the machinery had been landed at Greytown, the crushing of quartz had ceased, and the *whole staff* was employed in conveying machinery, making roads, &c.

"OUTSIDER" (Kenilworth).—A person buying shares, and accepting a transfer, subject to certain rules and regulations, is supposed to make himself acquainted with the nature of such rules. The Cost-book Principle, as we said before, is a mutual partnership, and a rule to prevent any retiring shareholder from taking his proportion of plant is legally binding upon all who accept shares under it; our correspondent, however, seems to think that he should have been informed of it before he bought his shares (in what mine he does not say), and asks whether, as he bought them on the understanding that the company was governed strictly upon the Cost-book System, he ought not to receive his proportion of machinery, notwithstanding the rule referred to? We think not, for mines having rules and regulations are as much under the Cost-book System as those having none.

"J. S. C."—JAVALI.—Our correspondent takes the correct view: the loss of Javali is very important to the holder of the fully paid-up and on B shares in Chontales, and here we confess to a large interest. Those who have been speculating largely in the ordinary shares would persuade the public that it is no loss, because its possession would entail a call, probably of 1*l.* per share, upon them, and which we and other holders of fully paid-up shares consider they have a right to pay rather than lose the mine.

USEFUL RULES AND TABLES.—Under this title an extremely useful volume has just been issued, by Prof. RANKINE, of Glasgow University, the object of which is to provide, in moderate bulk, a collection of rules and tables relating to those parts of mathematical and mechanical science whose application most frequently occurs in the useful arts, and especially in engineering and practical mechanics. The book contains all the information a practical man is likely to require, and as Prof. Rankine states that the use of algebraical symbols is avoided, except in those cases in which the rules cannot be clearly expressed without them, the number to whom the book will be useful will be largely increased. The new British standard weights and measures corresponding to the French, and now authorised to be used in this country, are carefully described, and as the use of these will ere long be rendered compulsory, owing to the enormous advantages they possess, this portion of the book should be particularly studied. The book, considered generally, may be regarded as a greatly extended "Engineer's Pocket Book," but it has the great advantage that it is not inconveniently crowded, and that whatever information is required can be readily obtained. The work forms a handsome volume of over 300 pages, and is printed and bound in Messrs. Griffin and Co.'s usual excellent style. It is, undoubtedly, the most useful collection of engineering data hitherto produced.

"QUARTERLY JOURNAL OF SCIENCE."—The original papers contained in the July number comprise—The Mortality of Liverpool and its National Danger; the New Iron Fields, by Edward Hull, of the Geological Survey; on the Habits and Condition of the two earliest known Races of Men, by Mr. W. B. Dawkins; Science and Crime; British Volcanic Rocks—Hints to Home Tourists, by Mr. A. Geikie; De la Rue and Celestial Photography; Geological Maps—their relation to Agriculture and the Coal Company; and on the Temporary Outburst of Light of a Star in Corona Borealis, by Mr. W. Higgins. The Chronicles of Science and Proceedings of Learned Societies are of the usual interesting character. In connection with the Geological Maps, it is very truly observed that there is sufficient cause for our striving to answer the question—By what means can we put off the day when our manufactures will cease to be able to compete with those of cotton and iron-producing countries? That things must come to that pass sooner or later is logically certain, and American manufactures *may* be able to compete with ours much sooner than we expect. Facts are not wanting, it is remarked, which tend to show that the area of our coal fields will, probably, be very much increased within a few years. The number is, probably, more generally interesting than any that has preceded it.

"POPULAR SCIENCE REVIEW."—The July number of this magazine contains original articles on Hydræ, or Fresh Water Polypes, by the Rev. W. Haughton, M.A.; How to Work with the Telescope, by Mr. R. A. Proctor, B.A.; on the Exhaustion of our Coal, by Mr. Leonard Lemoran, M.E.; on Hybridization among Plants, by the Rev. G. Henslow, M.A.; on the Light-emitting Apparatus of the Glowworm, by Dr. H. Fripp; Sun Force and Earth Force, by Dr. Richardson; and the Eruption of Santorin, by Prof. Ansted. The Reviews and Scientific Summary are of the usual concise and interesting character. In the article upon the Exhaustion of our Coal Fields Mr. Lemoran observes that he "regards the present excitement on the Coal Question as giving an undue importance to it. At the same time, he hopes that it may lead to such an examination as will, approximately, determine the questions already propounded. There is considerable uneasiness among the coal proprietors lest this enquiry should be instituted by the Government, and vigorous efforts are being made to persuade the public that our coal is, virtually, inexhaustible. Trade interests of various kinds, many of them of the most short-sighted description, will interfere to check enquiry,—and to lead it astray, if persisted in. The existing uncertainty is regarded most favourably by the interested few, but the removal of that uncertainty would greatly benefit the great mass of coal consumers, and certainly introduce a far more healthy condition amongst the coal owners than that state of intermittent fever which ever and anon prevails. Our coal fields may be sufficient to supply all our wants for many centuries; but within one century it may be found that we are beaten in our manufactures by America, because with the Americans coal will be cheap, whereas with us it will be dear. For several years there has been a slow but steady advance in the price of coal in the very centres of production. To determine if this increase of price is legitimate, and if it must continue to increase,—to suggest, by the aid of the physical and mechanical sciences, means by which the required amount of heat may be obtained with the consumption of less coal, and to introduce engineering appliances by which the coal seams, at great depths, may be worked without any greatly increased cost—are the true objects of an enquiry which may be instituted into the Exhaustion of our Coal Fields."

ANOTHER COAL BED.—The Flintshire Coal Company, who for some time have been sinking for Cannel for the manufacture of oil at their works at Saltney, were gratified a few days since by finding a promising bed of that mineral some distance up the shaft where they were sinking. The shareholders had almost began to despair of a successful result, but the discovery has, as a matter of course, revived their drooping prospects. The result of this undertaking is satisfactory in an eminent degree, as it proves the existence of a very extensive field of Cannel in this neighbourhood. We understand that the Cannel seam is 6 ft. in thickness.—*Flint County Chronicle.*

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

WHEAL TREVENNA.—The report inserted under this heading in last week's Journal referred to an entirely different mine—different in prospects and management. The error occasioned many enquiries to be addressed to the secretary of Wheal Trevenna for information, to which Mr. F. Neville promptly replied by issuing a circular, in which he says—"A few moments' consideration would show it could not possibly refer to this property, for it would be simply impossible for a mine to return 1900*l.* in tin alone in about twelve months with a pare of men. * * * I believe I can throw some light on the subject: our local agent, Capt. T. Jennings, was employed with our consent to investigate and examine a property called West Trelawny, near Redruth, and he reported on the same, a copy of which I am informed was sent to each member of that company, the words used, under head of Wheal Trevenna, St. Neot, T. Thomas, are identical with those of his printed report, and refer to that mine. To show the inconsistency of applying such remarks to a mine with prospects equal to any in the county, the landlord thereof is so satisfied with the energetic development of the mineral resources, that he has invited all hands to a dinner in Trevenna Wood, on the mine, on Friday next. These will number about 90, and with the officers, directors, and his own personal friends, set down it is expected 130. Any shareholder that can make it convenient to attend on that day, the directors of the company will be gratified to see them at the entertainment." We shall give a report of the proceedings at the dinner (to which a large number of mining men and captains have been invited), and which, we expect, will possess much interest for the shareholders in Wheal Trevenna, as well as other mines in the district.

WEST TRELAWNY (Limited).—Some anxiety seems to be existing amongst the shareholders in this mine, as to the manner in which the affairs of the company are conducted. The mine has lately been inspected by an agent, and as his report is exceedingly unsatisfactory, the sooner the shareholders communicate with each other, to get the mine thoroughly inspected, and a meeting called, the better. I should be glad to communicate with any shareholder for the purpose by addressing—J. P.

DYFNGWM MINES.—We have received several letters respecting the affairs of this company, and the Notice which appeared in last week's Journal. We are informed that "in consequence of Mr. Young's assertion that the mine was not worked properly, Capt. Ball, of the Lisburn Mines, and Capt. Ridge, of Llanidloes, were desired to inspect it, and report particularly on three points." There is no question as to the value of the property: that is admitted by all, and these reports fully confirm it; but the matter for consideration is, whether by an alteration in the management the mine cannot be brought into a dividend-paying state. Capt. Ridge says—"I feel convinced in my own mind as to the value of this undertaking, and must say that it is a really good mine, and well deserving of spirited working, as I cannot see how you can fail in meeting with great success to reward you all for your outlay." If they will not convene a special meeting to consider as to the most effective system of working the property, the directors should at least take energetic measures to show that they are not unmindful of the responsibility attached to their position, and endeavour to have a more satisfactory statement to lay before the shareholders at their next meeting. "Capital, and spirited working (says one correspondent, who knows the property well), must make the Dyfngwm Mines very valuable."

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JULY 7, 1866.

Notwithstanding the extraordinary convulsion which monetary matters, and, indeed, credit generally, has had to stand against for some time past, the export trade of this country has continued to expand at the same rate with which it commenced at the opening of the year, and nothing, surely, can more clearly indicate the soundness of commercial transactions, in their aggregate sense; and although money is not to be obtained but at high rates, and on the best paper, yet the shipping trade goes on increasing month by month. We see by the returns from the Board of Trade, which are now to hand, that the total declared value of articles, the produce of this country, which were exported during the five months ending May 31, amounted to 78,227,710*l.*, whereas for the same period of 1865 it was only 60,901,576*l.*, giving, consequently, an excess in favour of this year of no less than 17,326,134*l.* For the month of May alone the total was 15,870,131*l.*, against 13,194,758*l.* in May, 1865. We have, however, more especially to deal with those points which are identified with the interests which the *Mining Journal* more particularly represents, and it is satisfactory to mention the fact that 14,196,848*l.* were the produce of articles resulting from mining, against 12,713,786*l.* for the same months of 1865, giving a balance increase of 1,483,062*l.* In three items a falling off is shown to the extent, collectively, of 872,093*l.*, which consisted of machinery, to the extent of 562,106*l.*; copper, 284,438*l.*; and unwrought tin, 25,549*l.* On the other side, iron shows an increase of 1,414,058*l.*; coals and culm, 264,522*l.*; tin-plates, 222,865*l.*; steel, 194,415*l.*; hardwares and cutlery, 132,816*l.*; lead, 103,739*l.*; zinc, 13,275*l.*; and brass, 9465*l.*

The dealings in bullion and specie represent a total amount of imports of 8,837,509*l.*, against 6,973,521*l.* of exports, consequently giving a balance in favour of this country of 1,863,988*l.* The excess of exports over imports are, in six cases, equal in the aggregate to 5,207,698*l.*, but in thirteen, where the imports exceeded the exports, the total was 7,071,686*l.*, so that the balance benefit was as stated. The details are in another column.

THE DURATION OF OUR COAL FIELDS.

The Royal Commission appointed in accordance with the motion of Mr. HUSSEY VIVIAN was gazetted on Tuesday, and it is gratifying to find that it is so satisfactorily formed, comprising a very good mixture of practice and science; indeed, the practical element greatly preponderates. The scientific men upon the Commission are—the Duke of ARGYLL, Sir RODERICK MURCHISON,* Sir WILLIAM ARMSTRONG, Mr. ROBERT HUNT,* Mr. J. B. JUKES,* Dr. PERCY,* Mr. PRESTWICH, and Prof. RAMSAY.* The practical men are—Messrs. HUSSEY VIVIAN, JOSEPH DICKINSON (Government Inspector of Coal Mines for the Manchester district), G. T. CLARK, JOHN HARTLEY, JOHN GEDDES, GEORGE ELLIOTT, THOMAS EMERSON FORSTER, and J. T. WOODHOUSE. The Commissioners are required "to investigate the probable quantity of coal contained in the coal fields of the United Kingdom, and to report on the quantity of such coal which may be reasonably expected to be available for use; whether it is probable that coal exists, at workable depths, under the Permian, New Red Sandstone, and other superincumbent strata; to enquire as to the quantity of coal at present consumed in the various branches of manufacture, for steam navigation, and for domestic purposes, as well as the quantity exported; and how far, and to what extent, such consumption and export may be expected to increase; and whether there is reason to believe that coal is wasted, either by bad working or by carelessness or neglect of proper appliances for its economical consumption." The Commissioners will, doubtless, be instrumental in eliciting a large amount of valuable information, and with which we hope to enrich our columns.

* Government officials connected with the Geological Survey.

THE EXPORT COAL TRADE.—The exports of coal and coke from the United Kingdom continue to present an increase, having amounted in May to 900,821 tons, as compared with 863,295 tons in May, 1865, and 711,144 tons in May, 1864. The exports of coal—the expression including also cinders and culm—decreased in May to Russia, Denmark, Prussia, the Hanse Towns, Holland, Italy, the United States, and Brazil, but increased more or less considerably to Sweden, France, Spain, British India, &c. The demand for English coal in France appears to be largely increasing, the exports of coal to France in May having been 171,315 tons, as compared with 155,910 tons in May, 1865, and 114,165 tons in May, 1864. In the five months ending May 31 this year, the aggregate exports of coal from the United Kingdom amounted to 3,816,698 tons, as compared with 3,501,090 tons in the corresponding period of 1865, and 3,385,193 tons in the corresponding period of 1864. The exports of our coal to France show a very great increase, having been 747,786 tons, as compared with 656,940 tons to the corresponding date of 1865, and 606,907 tons to the corresponding date of 1864. The value of the coal exported in May was 453,728*l.*, as compared with 403,425*l.* in May, 1865, and 330,896*l.* in May, 1864. In the five months ending May 31 this year the aggregate value of our coal exports was 1,948,110*l.*, as compared with 1,683,588*l.* in the corresponding period of 1865, and 1,598,383*l.* in the corresponding period of 1864. The coal "tribute" paid by France in the first five months of this year was 350,529*l.*, against 292,997*l.* to the corresponding date of 1865, and 255,491*l.* to that of 1864. Our French friends appear to have abandoned, for good and all, the idea of freeing themselves from this "tribute."

THE SELECT COMMITTEE ON MINES.

HOUSE OF COMMONS, JUNE 25-28.

Present—Mr. NEATE (in the chair), Prof. FAWCETT, Mr. W. O. FOSTER, Mr. LIDDELL, Mr. POWELL, Mr. WOODS, Mr. KINNAIRD, Mr. GREENALL, and Sir P. DE GREY EGERTON.

Mr. S. W. BROADBENT, surgeon to the South Hetton and Murton Collieries, Durham, said: I have acted in that capacity 16 years, and I am besides medical officer to the Easington Poor-Law Union, and to the workhouse. The population of the entire Union is 27,000. There are nine large collieries in the district, and the number of coal hewers is 3500. There are 1200 workmen in the South Hetton and Murton Collieries, of whom 400 are coal hewers and 200 boys. The proportion of boys to men generally in the district is about that—1 to 2. There are very few between 10 and 12, and the provisions of the Act as to education are generally complied with. I have collected some statistics on the subject, and my conclusion is that the coal miners are a very long-lived race, and that the average of their duration of life is very great. According to Dr. Farr's tables, their average of life is three years longer than the aggregate of Englishmen, eight years longer than the Cornish miner, and only one year less than the men of the healthiest districts in the land. From 63 healthy country districts the average is 45 years; in Durham and Northumberland, 42; and in Cornwall, 34. In the Easington Workhouse there are only seven coal hewers, who are all old men, and their united ages amount to 498 years, giving an average of 71. The total number of deaths amongst the coal hewers in nine large collieries, including boys above 13, from all causes, during the last three years was only 123. There was no explosion in that time, and the average number of deaths from accidents was but eight. The total number of deaths in the whole population in that three years was 1864. In that time there were only 90 applications for out-door relief from coal hewers, and of those 39 were from old age, and others from accidents. There is a workmen's relief fund, established and managed by themselves wholly independent of the employers, who, however, contribute to it at the rate of 3*s.* per man. Besides this, there is another fund for accidents, to which the masters contribute 5*s.* per week for each man, and 2*s.* 6*d.* for each boy, and to which the men do not contribute anything. I am speaking only of the South Hetton and Murton Collieries, and there the total sum paid by the owners during the last year for accidents to men and boys was 70*l.* The sick fund has 400*l.* in the bank. It has been established 30 years—ever since the colliery began. There are two schools, with two schoolmasters and two mistresses. Each master has 70*l.*, and each mistress 40*l.*, with house, coals, and rates; 40*l.* a-year is added for religious services, making a total of 260*l.* They are not under the Committee of Privy Council. The average number of scholars in attendance in both schools of boys is 294, and girls 270—total, 564. There are night schools also in the winter, which are well attended. The coal miners in my district are a hard-working, shrewd, industrious set of men, and cleanly in their habits and persons, which tends to their longevity; their houses are clean, and they attend to sanitary considerations. A proof of this is the fact that in the three years there were but four deaths from fever and four from small pox in the whole Union.

By Mr. GREENALL: The parents pay school fees for their children. The masters provide education for orphan children.

By Mr. POWELL: The families average about four to each house. It is a settled population, with very few immigrants.

By Sir P. EGERTON: Dr. Farr's tables were furnished by him to the Statistical Congress. The health and general physical condition of the boys do not suffer from their employment.

Mr. A. HEWLETT, managing director of the Wigan Coal and Iron Company (Limited): I have been engaged for 20 years in mining affairs in Lancashire, and am a member of the executive committee of the Mining Association of Great Britain. Our firm employs 7000 persons in the coal and iron trade. The system of payment by measure is an old-established system of South Lancashire and Cheshire. It is a simple and inexpensive plan. A certain price is paid per tub, according to the size of the tub. A higher price is sometimes paid in one part of a mine than in another. If the coal becomes harder and more difficult to hew the price for hewing, or, as it is called, the scorage price, is higher, and the price often varies from fortnight to fortnight. Supposing part of the mine to be wet, payment by weight would act unfairly. The weight would be greater when the coal is wet, and yet the quantity of coal no more than if it were dry. The royalty to the superior landlord is also paid by the measure, so much a tub. There is no practical grievance to the men in this mode of paying. They contract to fill a tub for so much; that tub is seen when the contract is made. It would be prejudicial to people to be tied up by an Act of Parliament as to the mode in which they should make their contracts. If the old system were thus subverted there would be strikes and all kinds of evils. I agree with the evidence of Mr. Gilroy on this point.

Mr. LIDDELL: Have you at your pits a "justice man?"—In one instance; and I should like to set right a statement made to this Committee as to a dispute on this subject. About three months ago the men at one of our pits asked to have a justice man. There was no objection, and he stayed for two or three weeks. On one or two occasions he interfered with the banksman, and I gave instructions that if he interfered again he was to be ordered off the premises. He did so interfere. He not only remonstrated with the banksman for condemning some particular tub, but tried to prevent him from taking it, and impeded the working of the colliery for some time. I ordered him away, but the policeman kept him two or three hours, instead of our summoning him, as we intended. When the case was heard it was dismissed, and I have allowed the man to come back, and he is now behaving well. There is no objection to the man being there, if he does not interfere with the work. He had a perfect right to say that such and such a tub was improperly taken from the workmen, but not to stop the working of the pit. His duty would be to report the circumstance to the colliers, and for them to speak to the manager about it.

By Mr. GREENALL: The workmen have never intimated that they dislike measure, and would prefer working by weight.

By Mr. FOSTER: Those who have complained with respect to measuring have been delegates, parties quite strange to our colliery. If our own people wanted to make a representation, they could do it by a deputation. Those I call delegates are those who come prominently before the public—such men, for instance, as Mr. Pickard. I should object to hear anybody on such a subject not employed by us, as I do not approve of anybody interfering between myself and my workpeople. When we have had matters of difference with our workpeople, it has related to wages.

By Mr. WOODS: Payment is made fortnightly. The men always play on the Monday after pay-day, and it is generally Wednesday and Thursday before the pits get into anything like full work again. I have tried to get the men to work on the Mondays, but could not succeed.

Sir P. EGERTON: Does play-Monday form part of the contract with the men?—It does not go so far as that, but it is so much the custom that I do not think we could prosecute a man for absenting himself on play-Monday. If the wages were paid weekly, there must be another play-Monday. I have tried payment on Fridays, and then the men played on Saturday as well as Monday.

By the CHAIRMAN: I know no district where weekly payment is the rule. There are individual instances, but I cannot say what the effect is. It would involve a very serious additional staff, in order to get out the wages-sheets once a week. It is a very onerous matter, with 7000 people employed, to get out the pay-bills. The men have never requested weekly payments.

By Mr. WOODS: The provisions of the Act are very strictly carried out with regard to education. Mr. Gilroy's evidence is correct on that point as to Wigan and its neighbourhood. I have no strong feeling in favour of employing boys under 12. At the particular request of the men in our pit, I allowed it there, but we have only 24 in the whole of our works. To show how anxious the men are to get their boys on under 12, I may mention that within a fortnight a man falsified the register of the age of a boy to the extent of 18 months, to get him into the colliery. The case is in the hands of the Inspector, to prosecute if he thinks fit. I refuse boys under 12 because, practically, in their case the Act gives so much trouble. We, however, do not wish to be deprived of the option in cases of necessity. I agree with the evidence of Mr. Gilroy as to the employment of women, and think it would be a great hardship on them if they were prevented from getting their living at the pit's mouth. Those we employ are generally the daughters or wives of our men. Their personal and moral status will bear very favourable comparison with any other women employed in the neighbourhood. They are hale, hearty women, and some who have come from the factories have changed very much for the better in health and appearance, and would not go back on any account.

Mr. POWELL: Do you think the women employed on the pit bank lose caste in any degree amongst persons in the same class of life?—Certainly not.

Mr. WOODS: You are aware that a system of sub-inspectors has been petitioned for; how would it work?—Very badly. If persons of a lower status than the present Inspectors were employed it would lead to disastrous results. The officers of the mines are now exceedingly numerous and well selected, and they would naturally say they were better qualified to judge than the persons put over them as sub-inspectors.

By Mr. LIDDELL: I should not think more work is thrown upon the Inspector than he is able to perform. I never hold any communication with the Inspector as to applications sent to him by the men. I should not feel it right to ask why he came, or if anybody sent for him.

By Mr. GREENALL: I have no objection to his visits, and am always glad to see him. I never knew an instance in which a workman came to grief for giving information to the Inspector.

The CHAIRMAN: Do you not think in ill-managed collieries, those not so well managed as yours, more frequent visits of the Inspectors would be advisable?—If bad management goes on to their detriment it is the fault of the workmen themselves. Personally, and the coalowners of our district, I have no objection whatever to there being more Inspectors or more frequent visits. It is unfortunate in the interests of the coalowners that there should be explosions, for the rate of wages in that colliery rises very much indeed. There were two explosions in the Ince Hall Collieries when I was underviewer, and I know as a fact that it cost the company many thousands a year more for the working of that particular seam of coal than it did before the accident. Even now they have considerably more to pay for the working of that coal than I who work the adjoining colliery have to pay for mine, and it is now 12 years since the accidents.

Mr. GREENALL: Then an ill-managed colliery, or one with a bad reputation, has a continual penalty hanging over it in the shape of higher wages?—Certainly; the men are good judges, and if they think a mine is not safe they will not work there.

Prof. FAWCETT: Are wages now higher in the Dukinfield Colliery than in others?—They have not got to work again since the accident; but it is an undoubted rule that wages do rise after an accident.

By Mr. WOODS: And the best men would leave, and their places have to b

filled by an inferior class of workmen. Supposing we were paying 50,000*l.* a year for wages, a very small percentage would be a heavy penalty. I have heard no complaints as to the mode of conducting coroner's inquests.

Prof. FAWCETT: Does it not often happen (take, for instance, the case of the Edmund's Colliery, where there was an explosion) that men are paid a large bonus to work a dangerous part of a mine, and they, by risking their own lives, risk the lives of a great many others, this bonus being a temptation to them to risk their lives?—I have never known such a bonus paid within my experience. The probability is that after an explosion the mine may be less dangerous.

By Mr. WOODS: My attention has been called to the evidence of a man named Baxendale, who said that he gave up his place as a fireman because he was thwarted in doing his duty. I wish to observe upon that, he run away for neglecting his work, and was prosecuted for it. My attention has also been called to evidence respecting a mine of which I have the management, and am part owner, to the effect that the mine is so hot through defective ventilation that men have to work naked. The witness said he spoke of the California Pit, in the Arley Mine. Upon this I at once took observations as to the temperature of that pit, and found the mean temperature 66°; at the greatest distance from the shaft, 2500 yards, it was 73½°. On the surface it was 67½°. At that time 106,000 cubic feet of air per minute was passing through the mine. There was not a person in the whole pit without his clothes on. The men in the actual working places had their flannel shirts off, but for the sake of convenience, and not on account of the temperature. Another witness said the men go down at 4 in the morning and stay till 6 at night. The average time at which they go down is 5·30, the rule being that they must be down before 6, and the extreme of coming up is 4·30. There is 1½ hours for meals, so that the working time is 9½ hours for 10 or 11 days in each fortnight.

Mr. ISAIAH BOOTH, mining engineer of Oak Chamber and Chadderton, and other collieries, near Oldham, Lancashire, and managing director of the Mostyn Colliery, Flintshire, said that he agreed with the evidence of the last witness as to weighing, education, the employment of boys, sub-inspectors, and juries. He added that colliers' wages had increased very much of late in Lancashire—25 per cent. at least. He had taken out the wages of four sets of his own men for the fortnight ending May 10. The first set made 3*l.* 19*s.* each for 120 hours; the second, 2*l.* 8*s.* 4*d.* for 100 hours; the third, 3*l.* 7*s.* 6*d.* for 108 hours; and the fourth, 3*l.* 13*s.* 4*d.* for 108 hours. It was hard work, and they had something to pay out out of it, but it left them 7*s.* 9*d.* for a full day's work. There is not the same regular attendance of workmen in a pit as in a factory. The men take a day or half a day, just as it suits them. This irregularity would make a half-time system, or an alternate-day system, with respect to boys impracticable.

Mr. THOMAS KNOWLES, the Mayor of Wigan, of the firm of Pearson and Knowles, colliery owners, said they had from 900 to 1000 persons in their employ, gave strong confirmatory testimony of that of Mr. Gilroy and Mr. Hewlett, and the committee then adjourned.

JUNE 28.—Present: Mr. NEATE (in the chair), Mr. CLIVE, Mr. GREENALL, Mr. LIDDELL, Mr. WOODS, Mr. FOSTER, Prof. FAWCETT, General DUNNE, and Sir P. DE GREY EGERTON.

Mr. THOS. W. JEFFCOCK, of the firm of Brown and Jeffcock, mining engineers, of Sheffield and Barnsley: I have collieries under my superintendence in South Yorkshire, Derbyshire, and Leicestershire. We have weighing machines placed at the pit's bank in all of our collieries, and the coals are regularly weighed. The workmen have a check-weigher. No disputes have ever arisen between the banksman and the check-weighman, or as to the accuracy of the machine. It is frequently tested by either the weigher or the engineer at the colliery. It is not liable to inspection by a public officer, such as the inspector of weights and measures, but we should have no objection at all to that.

General DUNNE: Is there any difficulty in applying weighing machines to the case of any colliery you have seen?—No, I do not think there is.

Mr. LIDDELL: But in the event of measuring being the custom of any district, you would not recommend a change?—Certainly not. I do not think it calls for legislative interference at all. I think weighing the better system for the country I am acquainted with.

By Mr. LIDDELL: We pay our workmen once a week. We began to do that about the beginning of the year, because the men insisted upon it. There was some dispute at first, and threats of a strike, but the masters in the end agreed to it. At the commencement they did not adopt a play-day at all, but now we find that Monday is getting worse every week, and that, in fact, both Mondays in the fortnight are taken. The result of weekly payments will be the loss of an additional day in the fortnight. That will be productive of inconvenient results, and the supply will be lessened. I think the fortnightly system preferable, and would be glad to return to it if I could.

By Prof. FAWCETT: I think the majority of the men are in favour of weekly payments; but I think a collier in our district is better off if he gets his money only once a fortnight, because he is generally drinking when he has money in his pocket, and nothing else to do.

Mr. LIDDELL: Do you mean that the colliers are always drinking when they have money in their pockets?—Yes; their wives prefer fortnightly payments. As a rule, colliers are very fond of getting into a public-house, not only on Mondays but on Sundays. I make these statements from enquiries I have made amongst the wives, and it is the result of what they have stated to me, as well as my own observation.

Prof. FAWCETT: Of course you would not think of asking the Legislature to interfere in a question like this, but leave it to be arranged between masters and men?—No doubt.

General DUNNE: Agricultural labour is paid for weekly, and why should weekly payments have a more demoralising effect upon colliers?—It is so.

By Sir P. EGERTON: Credit is given at the public-houses as well as the shops to a great extent.

By Mr. LIDDELL: The men can earn plenty of money if they choose, and might be a well-to-do class. As a rule, they have comfortable houses, and their wives are thrifty and industrious. There are sick clubs at every colliery, which are well supported. In most cases the masters assist it. The means of education in our district are ample. I agree with Mr. Dickinson as to the employment of boys, and the danger and inconvenience of shifts. I am not favourable to the appointment of sub-inspectors, unless Government will take all the responsibility of accidents on their own shoulders. I do not see any objection to the present mode of forming juries.

Mr. JOHN CHAMBERS, of the firm of Newton, Chambers, and Co., Thorncliffe Coal and Ironworks, Sheffield, and a member of the Executive Committee of the Mining Association of Great Britain: I have been in the coal trade 40 years. We employ about 2000 people. We pay by weight, and we prefer weighing to measuring, because when we measured we had a loss of about 10,000 tons a-year, and since we instituted weighing that loss has been reduced to 2000 or 3000 on what we pay the colliers. There is, however, an evil with it, and that is that the collier will send out all the dirt that is in the mine unless we are very vigilant. I made some observations a month or two ago, and found the colliers were sending out 56 lbs. of dirt to a ton of coal. A complaint was made, and that amount was at once voluntarily reduced by the colliers to about 28 lbs., but that 28 lbs. would cost about 1250*l.* a-year on the coal we draw. There is no fixed quantity of dirt allowed. The workmen send up 21 cwts. to the ton, but as we sell 21 cwts. to the ton all the dirt is loss to us. The weighing-machines are continually tested, and we have no complaints or disputes.

By Mr. FOSTER: Weighing has been the custom of the district since 1860. Whatever preference I may have for weighing, I do not want an arbitrary Act of Parliament to impose weighing where the custom has been to measure. The present Act of Parliament is quite sufficient to give the colliers protection from any unreasonable proceedings at the pit bank, but if you give the colliers power to interfere at the pit bank, you damage the owner to a considerable extent, and take the management out of his own hands. I have no objection to the presence of a check weighman, but would always wish that that man should be appointed with our sanction, and out of our own men, who would have our confidence, as well as that of the men. Under weighing the temptation to the men is to send up dirt, and under measuring to put as little as possible into each corf. But with weighing we have abandoned the system of forfeiture, as it led to so much dispute. The reason we reckon 21 cwts. to the ton is because the railways have established 21 cwts. to the customer, and so in order that we may sell 21 cwts. we ask the collier to give us 21 cwts. Instead of that, if he gives us ½ cwt. of dirt, which we cannot sell, we lose it entirely. I do not suppose the collier knows or cares how much dirt he puts in, but when I speak of 56 lbs. and 28 lbs., I am talking of an average of the day's work. We pay once a fortnight. In 1860 we paid weekly to test the system, but at the request of the miners we went back to fortnightly payments. It was as inconvenient to them as to us. The greatest objection is that it doubles the time taken up by the head viewers, under-viewers, stewards, and others, in measuring off the heads and calculating the work, and that time is taken from their attention to the management of the pit—a most serious thing. I would not object to the cost of additional clerks, but in the pit the results are not satisfactory, and might involve great neglect.

By Mr. GREENALL: We pay from 1600*l.* to 2000*l.* a week for wages. The difference in individual earnings depends on the skill of the men. The average of 20 sets of men which I have taken is 7*s.* 6*d.* a day, but I have another class of men who have earned 8*s.*, 10*s.*, 12*s.*, and 14*s.* per day of eight hours; and these men, at least 400 hands, were instructed to strike for an advance of 5 per cent. on their wages by John Normansell. They did so, and have been on strike for six months.

Prof. FAWCETT: Were the sums you mentioned their average earnings?—Yes, they were: and I have now unskilled men working in those very places, who get 8*s.*, 9*s.*, and 10*s.* per day in the eight hours. It is the Silkstone coal, which is a tolerably soft working coal.

General DUNNE: When you state the earnings have you made the deductions?—Yes; it is the clear, nett earnings of the men. The rise of 5 per cent. struck for was general in the district, but I refused to pay it on these large earnings. I was willing to pay it, or even 10 per cent., on the men's earnings when they were not more than 5*s.* a day.

General DUNNE: You said the men were put up or instructed to strike by some one: what did you mean by that?—I mean that the Union men in Barnsley were instructed by John Normansell to strike, and they have struck. There has been a constant intimidation brought to bear upon the workmen to prevent them from going into the colliery.

General DUNNE: There is a power, then, which can induce men to strike?—Yes; the associations.

General DUNNE: Are there any any associations of the masters to resist that?—To some extent.

Prof. FAWCETT: Do not the men who get, as you say, 10*s.* to 14*s.* a day employ others under them?—One of them will have two hands under him to fill and draw his coal. A boy of 16 thus assisting will get 3*s.* 6*d.* a day, and if he has a man he will pay him 5*s.* or 5*s.* 6*d.* a day.

Prof. FAWCETT: Then it come to this, that quite half the men in the mine earn only 5*s.* a day?—I do not think that half the men are getting so little as that; most of the helpers are boys. If you put the 5*s.* and 14*s.* together you come to a respectable average.

The CHAIRMAN: Do you think that a good hewer in eight hours, after paying his expenses and carrying, can do enough to make 14*s.* a day?—Yes; we work eight hours, and when we came down to eight hours instead of ten it cost the coalowners 6*d.* per ton extra money to bring the coal to the pit's bank.

By Mr. GREENALL: Wages have greatly advanced of late years. From 1845 to 1855 the increase was 9 per cent.; then, from 1855 to 1865, the further increase was 33 per cent., or 42 per cent. in 20 years; and by improved machinery there is an advantage to the collier of 15 per cent., making 57 per cent. in 20 years. The price of coal has increased, but not in the same proportion. I agree with former witnesses as to the danger of shifts of boys, and generally in the evidence of Mr. Jeffcock.

The committee then adjourned.

The comparative statement showing the accidents in collieries during the past ten years, handed in by Mr. J. J. ATKINSON, on June 7, has now been printed. It shows the total number of deaths, classified in the manner usually adopted by the Government Inspectors, and a statement of the tons of coal raised, in continuation of the extremely valuable return of May 3, 1861. There is appended to the statistics the following summary and statements of results:—

SUMMARY FOR TEN YEARS.

	No. of deaths.	Per cent.
Deaths from fire-damp explosions.....	2019	20·36—About one-fifth.
Falls of roof and coal.....	3953	39·87—About two-fifths.
Shaft accidents.....	1710	17·24—Less than one-fifth.
Miscellaneous in mines & above ground	2234	22·53—More than one-fifth.
Total.....	9916	100·00

Comparison of results in the two last of the ten years embraced by the table:—

During the two years, 1856 and 1857, there were 2144 deaths from colliery accidents; and the coals raised during these two years amounted to 146,399,493 tons, whereas, eight years later, in the years 1864 and 1865, 194,034,088 tons of coals were raised; so that if the deaths had increased in the same proportion as the increase of the quantity of coals raised, there would have been 2841·6 deaths in the two years 1864 and 1865; whereas there were only 1851 deaths in these two years, being 990·6 fewer deaths in proportion to coals raised; being a reduced fatality to the extent of nearly 35 per cent. in eight years, when considered in relation to the quantities of coal raised.

Considering the table as divided into two quinquennial periods:—

During the first period of five years, from 1856 to 1860, both inclusive, there were 5089 deaths from colliery accidents in the kingdom, and during the same period 381,067,047 tons of coal was raised; whereas during the succeeding period of five years embraced by the table, from 1861 to 1865, both included, 468,548,90- tons of coal was raised, so that if the deaths had increased in the same proportion as the increase in the quantity of coal raised, the deaths during the latter period of five years would have been 6257·3 in number, whereas they only amounted to 4827, being 1430·3 fewer deaths during the second than during the first of the two quinquennial periods embraced by the table, when taken in connection with the quantities of coal raised. This is a reduction of fatalities to the extent of 22·9 per cent. in five years, being at the rate of 4·58 per cent. per annum, in relation to the coal raised.

The results exhibited by the tabular statement as to the effect of the Act 25 and 26 Vic., c. 79, Aug. 7, 1862, on the number of colliery accidents:—

During a period of three years (1860, 1861, and 1862), immediately preceding the passing of the Duplicate Shaft Act (1862), there were 3178 deaths from colliery accidents throughout the kingdom, and during the same period 264,358,164 tons of coal was raised; whereas during the succeeding three years after the Act was passed (1863, 1864, and 1865) there was 286,853,443 tons of coal raised, so that if the number of deaths had increased at the same rate as the coal raised had increased in quantity, the number of deaths during the latter triennial period would have been 3448·4, whereas the actual number was only 2758 deaths, being 690·4 fewer deaths during the second than during the first of these two consecutive triennial periods. This reduction in the fatalities is 20·02 per cent. in three years, when considered in relation to the quantity of coal raised, being a rate of 6·67, or 6¾ per cent. per annum: indicating that the rate of reduction in the number of deaths has been greater since the passing of the Duplicate Shaft Act, up to the end of 1865, than it was previously, when considered in relation to the quantities of coal raised, whatever may have been the cause.

We have previously omitted to mention that during the whole of the enquiry the Mining Association of Great Britain (which represents the employers of labour) has been represented by Mr. J. W. DAY, of Chesterfield, the secretary; Mr. MASKELL PEACE, of Wigan, the solicitor; and Mr. CHARLES PARKES, the parliamentary agent of the Association, who have watched the proceedings on behalf of the coal owners and managers.

GRANULATION OF BLAST-FURNACE SLAGS.—For the past two years the granulation of blast-furnace slags has been successfully accomplished in France, the whole of the inconvenience usually arising from the accumulation of masses of vitreous matter being thus avoided. The slag is simply permitted to run into water instead of running upon the ground as usual. The water used is the waste from cooling the tuyeres, &c. A suitable pit is formed to receive the water, and the molten slag is run through a gutter into it—of course, becoming finely divided and friable. The slag-sand is raised by an endless chain of buckets, and removed in carts, or otherwise. It is useful for making mortar and silicious bricks, as well as for agricultural and a variety of other purposes. The invention of the process is due to Mr. Minary, and may be seen in use at the works of the Franche-Comte Forges Company, in the department of Jura. The sands vary in colour from dingy-grey to dark brown or black, and weigh about 1200 killogrammes the cubic metre.

IMPROVEMENTS IN LAMPS.—Few who have travelled upon the Metropolitan Railway will have failed to notice the excellent workmanship displayed in everything connected with it, from the most important to the most trifling article, the result being a degree of lightness and elegance which could scarcely be expected in so unfavourable a position as the continuous tunnel which forms the line; and there is, probably, nothing that more speedily strikes the eye than the beautiful globe lamps with which the stations are lighted. Recently, however, an improvement has been made even in these, Mr. JOHN PARKES, of London-street, Paddington, the gas engineer of the company, having invented a new lamp, with improved door, which renders it as nearly as may be perfect. It will have been observed that the framework is so light as to cause the lamp to appear almost like a globe of glass, yet Mr. Parkes has succeeded in giving this apparently fragile structure such strength that it will bear a man's weight without giving way, so that the lamps, once fixed, are maintained quite as cheaply as the most unsightly lantern ever constructed. The globe is divided by six metallic ribs, which ribs are held in position by three rings or bands, the one central, and, of course, equal in size to the circumference of the globe, and the other two small, and holding together their top and bottom extremities. Both ribs and bands are duly strengthened with steel rods, for which a groove is formed in the thinner metal, which holds the glass. Owing to the general lightness of the structure, the door, however light may be the hinges and fastenings used, has always had a clumsy appearance, and carelessness on the part of the porters sufficed to damage it. These difficulties have been entirely removed by Mr. Parkes's last invention, which may now be seen applied to lamps at Aldersgate and Moorgate stations. He uses a sliding door, which is held in its place by a ring within the upper band, and a clip, which grasps the central one. By this arrangement the utmost neatness is secured—indeed, it is difficult to find the door without carefully looking for it; and as there remains no part likely to be injured, even by carelessness, the advantages possessed by the lamp will be readily appreciated.

COAL AND STEAM SUPERSEDED.—A great deal of interest is attached to some experiments which have taken place at Liverpool to demonstrate the merits of a machine invented by Mr. JAMES SMITH, of Seaforth, and Mr. S. A. CHEASE, of Egremont. The invention offers a complete solution to the problem—How can we obtain Perpetual Motion? and if it be generally employed for the production of motive power, the calculation of the Royal Commission for ascertaining the position of our coal supply will be so seriously interfered with as to be almost valueless, for it may be found that before many years have passed away men will no more think of using steam to obtain motive power than they now do of rubbing sticks together to get fire. The invention is for "an improved arrangement of valves and other appliances for a new description of hydraulic engine for raising water and other fluids above their common level, the fluids so raised to be used as a motive power." The principle of the invention consists in constructing a reservoir having two compartments. The upper compartment has a lift-pump for raising water, or other fluid, from the lower compartment, producing two different levels of the fluid in the one reservoir. Into the lower level of the fluid they insert a portion of a tank or tanks, allowing the fluid in the reservoir to have free play around them. Inside, and on the bottom of the tank or tanks, is fixed a box or boxes, each box having two sets of valves, composed of gun-metal, one set opening to the fluid contained in the tanks, and the other set opening to the fluid contained in the reservoir. These valves are so arranged that when the pair or set of valves in communication with the fluid in the tank are open the other pair or set are closed, and shut off the communication, and *vice versa*. On the upper side of the box or boxes is a circular aperture, around which is fitted a cup leather valve. This valve fits the lower part of an air-tight cylinder or float, which is inserted in the circular aperture, and by means of connecting-rods the cylinder or float is attached to the end of a lever or beam. The other end of the beam is united by two connecting-rods to the crank of the engine and the piston-rod of the lift-pump. On the shaft is fixed an eccentric to work the gear which actuates the tank valves. On the head of the tank they fix a feed-pipe, which passes downwards into the upper compartment of the reservoir, having a valve attached to it, which is always kept beneath the high level of the fluid in the upper compartment of the reservoir, and thus acts as a syphon. They then fill the tank and feed-pipe with water, or some other fluid, and raise the fluid in the lower compartment of the reservoir until the tank valves are submerged. They then fill the upper compartment, which contains the lift-pump, to within a few inches of the lid of the tank, when the engine is ready for use. The production and cause of motion may be thus described:—The floats being hollow, and merely filled with atmospheric air, are lighter than a space of equal magnitude filled by a column of water, and it, therefore, follows of necessity that when the tank-valves are open to the gravatic force of the fluid contained in the tank, that force acts on the bottom of the float and causes it to rise, and when the valve is closed against the action of gravatic force in the tank, and open to the reservoir, the float falls, there being no power beneath to support it, thus producing a reciprocating motion, which acting on the beam produces rotation of the crank, and at the same time actuates the eccentric, causing the tank-valves to open and close; and this motion is continued until the syphon-valve is closed, shutting off the atmospheric pressure by which the water or other fluid is forced into the tank by the syphon feed-pipe, and by which the water or other fluid is raised through the agency of the lift-pump into the upper compartment of the reservoir.

REPORT FROM SCOTLAND.

GLASGOW, JULY 4.—Very decided progress has been made this week towards a termination of the dispute between the ironmasters and their miners, a large proportion having commenced work at the reduction of 1*s.* a day. During last week the men were allowed to lift their graith, and the masters showed their indifference by withdrawing their horses, used for haulage, from the pits, and turning them into a field to graze. This very unusual step rather staggered the men, and evidently shook their determination; and, as a consequence, the hands have been returning in small detachments since Monday; and at a meeting of colliers and miners, at Rosehall, the latter declared that if the colliers did not immediately go in they would speedily supply their places: they, however, commenced to-day. The workers seem to have become pretty intelligently impressed with the determination of the masters, as they saw furnace after furnace uncomplainingly damped out, and the working machinery left idle and abandoned-like, as if the employers had no intention of ever again resuming operations; and these facts spoke more eloquently to them about their future prospects than all the bluster of their Union orators, and urged them to a speedy return. Such being the state of matters, it is useless enumerating the additional furnaces which have been blown-out since our last, as the dispute is virtually at an end.

The Pig-Iron market has declined from this fact partly, and partly from the fact that there are still needy sellers, offering parcels of warrants for prompt cash. This has brought prices back nearly 5*s.* a ton since last week, but unless the market continues to be supplied by iron of this description, prices will ascend 5*s.* to 10*s.* a ton before the autumn shipments are at sea. The drooping tendency of the market has been taken advantage of by buyers, who have held off, expecting lower quotations, and a diminution of the shipments for the week has taken place, those for this year being 13,565 tons, against 14,620 tons same week last year, which is a decrease of 1055 for the week, and makes the aggregate decrease of the year 69,530 tons. Of pigs in store, Connal and Company, and the Forth and Clyde Canal Company, have jointly 534,182 tons; last year they held 352,339 tons; Of the first sum there are warrants in circulation for 511,843 tons; last year the warrants in circulation were for 352,339 tons. At Ardrossan there are only 4942 tons in store, as compared with 23,750 tons last year; and the warrants in circulation are for 2044 tons of the first sum, and 18,000 tons against the second sum. The average price for the month and previous five months, compared with those of the same periods of 1865, are—

	Jan.	Feb.	March.	April.	May.	June.
1866	66*s.* 4*d.*	71*s.* 1½*d.*	77*s.* 3*d.*	78*s.* 4*d.*	57*s.* 0*d.*	54*s.* 0*d.*
1865	49 9	50 4½	50 10	53 9	54 1	54 9

To-day a very considerable decline took place in pigs, owing to the re-lighting of the furnaces, and as low as 52*s.* was taken on early 'Change, but prices got better, and closed at 52*s.* 9*d.* buyers, cash; sellers, 53*s.* The Malleable Ironworks have commenced operations this week, and, aided with occasional orders from the Clyde, a fair business season is expected to ensue. Foundry iron is in request at good prices.

The Coal Trade is active, in preparation for the Midsummer shipments, and prices are firm, though not advanced. The colliers seem rather in the mood to be sceptical of their leaders at the present time; and, after all their mass meetings and open-air demonstrations, and boisterous harangues to hold out firmly and they would be led on to victory, the great body of the miners have quietly returned to their callings at the reduction, as being the best of the two evils. This step is regarded with unfeigned delight by a large body of artizans, whose occupations would be all more or less jeopardised by a scarcity of coal, and the most intelligent of the colliers themselves are pleased with the issue. Stocks at all the Lanarkshire coal fields are low, and supplies are inadequate, but we are happy to know that at collieries where last Saturday was the pay-day the men commenced work on Monday, for the first time for some months. The four days a week, with only four days' pay, is telling now severely on some families, and the men are beginning to see the folly of the course they have been pursuing, and the unnecessary misery they have been subjecting their families to for a mere figment. This short day is likely to end generally before long, and it cannot end an hour too soon for all concerned. The shipments of coals from the Scotch ports look dreadfully deficient when compared with those of same week last year, but they are worse in look than in reality—the figures being 24,640 tons, against 40,920 tons, but last year the shipments from Ayr were fully 11,000 tons, while this year no return has been sent in time to make up the weekly statement, and will have to be added next week.

The engineers and shipbuilders' dispute has resolved itself, by the body of the men accepting the masters' terms; and although it is understood that none but non-society men were to be employed, the employers have not been over inquisitive in catechising the applicants who have applied for work. There is a paucity of blacksmiths, but these are coming in slowly too; and, with the exception of the London and Glasgow Engineering and Shipbuilding Company, and one or two others, who are deficient in rivetters, all the works have again their full complement of hands. However, if the men persist in declining to accept of work with the parties mentioned, a general lock-out of the rivetters, &c., may yet be the result, as the masters will not admit of any firm being made the scape-goat of a Union cabal. At a private meeting of the employers, the feeling was pretty general that another lock-out of certain classes of workmen should be resorted to, but this uncongenial step has been delayed for another week, to see whether the men may not come in of their own accord, and if they do not a lock-out will be the inevitable result.

The launches of the month have suffered by the temporary cessation of work, only 9 vessels, of 6600 tons, having been floated in June, against 20 vessels, of 19,000 tons, in 1865, and 19 vessels, of 14,260 tons, in 1864. An iron sailing ship, named the *Sussex*, has been launched for Mr. George Marshall, London, of the following dimensions—220 by 35 by 22 feet, and 1300 tons register.

In consequence of the excessive drought in Perthshire, the Earn has been unusually low, and many persons have lately been searching its bed for pearls. Some of those found would be worth from 1*l.* to 2*l.* each.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JULY 5.—There is no change to report in the state of the Iron Trade. The demand is quiet. Orders are, no doubt, kept back, but if the rumours current to-day of peace between Austria and her Northern and Southern enemies should prove true we may hope for a rapid recovery of prosperity. The Hardware Trades are quieter. Ten per cent. suppresses enterprise, and on all hands there is a disposition to wait and see what will come. Staffordshire is gratified to find that the Chairman of the South Staffordshire and East Worcestershire Ironmasters' Association, Mr. John Hartley, has been nominated on the Commission to enquire into the prospects of our coal supply. Few men are better adapted to take a sober view of a difficult question, on which men are apt to take a party bias.

Staffordshire has at length added one to the numerous wrecks of banks with which the recent panic rush has strewn the commercial strand. Almost the last private bank in Staffordshire—only two others remain—has closed its doors this week. This is the bank of Charles Harvey and Son, of Longton, in the Staffordshire Potteries, which was established in 1821, and had a fixed issue of 5624*l.* The sole proprietor was Mr. Wm. Kinwright Harvey, who was a magistrate of the county, and who, when a few years ago Colonel Vernon, a member of an old Staffordshire family, left the county, succeeded him in the position of Provincial Grand Master of the Freemasons of Staffordshire. In this capacity he took, on Monday week, a prominent part, in laying the stone of the North Staffordshire Infirmary, proving the stone, according to the formula of Freemasons, after it had been laid by the Prince of Wales. On Friday he left home, on Tuesday afternoon the bank closed earlier than usual, and on Wednesday morning, when the suspension had become generally known, a great crowd assembled to read the usual notice, which ascribed the failure to the "absence of Mr. Harvey," who, it seems, has not returned, "and the refusal of the London agents to honour advices." A circular to creditors states that "it is hoped that the estate will be able to pay 20*s.* in 1*l.*, if wound-up under an assignment by trustees." The manager requested creditors not to transfer their accounts for a few days, as "negociations with one of the strongest banks in the neighbourhood are now pending." The Midland Bank (Limited) has a branch at Longton.

The resolution of the Scotch and Welsh ironmasters to reduce wages is exciting a good deal of attention here. It is thought that the Staffordshire men have considerable funds, but they are likely to be reduced by the present dullness of trade, and if the reduction should be accepted north and south, it is sure to follow here.

Fears are entertained of a serious dispute in the Potteries on a

subject which 30 years ago led to a struggle which reduced a most flourishing district to the wretched state of a closely besieged city. Previously well-to-do artizans and their children picked up scraps of vegetable or bones out of the gutters, and people who remember the strife shudder to recal its miseries. It was owing to a contest on the question of what is called "Good from the oven"—that is, of the work of those who fabricate the ware being tested by and paid for only on standing the test of firing in the oven. There is now far more intelligence and self-restraint, and it is not likely that the scenes of 30 years ago will be in any way re-enacted.

Dudley is this week, and will be for some time to come, the scene of an exhibition such as is seldom offered in a provincial town. The readers of Hugh Miller's "Thoughts on England and the English People," may remember his walk from Wolverhampton to Dudley, and his description of the three hills, the "three Silurian islets" as he calls them, one of which is crowned by Dudley Castle, and all of which are storehouses of minerals, alike valuable to the owner and to the man of science. The Geological Museum at Dudley won Miller's warm praise; in the exhibition it is supplimented by many valuable contributions. The Earl of Dudley sends his pictures, one of the finest private collections in Europe, and numerous other most rare, and costly, and beautiful works adorn the walls. Whilst Witley Court empties itself of its treasures of fine art, the noble Earl's Round Oak Ironworks furnish a very interesting collection of examples of iron in every shape, and displaying every element of strength of which metal is capable, and other manufactures are represented in a most interesting manner. It is not too much to say that such an exhibition would make a stir in London, which is perhaps putting its merits as strongly as it is possible to state them.

The Birmingham Joint-Stock Bank (Limited) is paying an interim dividend at the rate of 20 per cent.; and the Patent Nut and Bolt Company (Limited), of Smethwick—formerly Watkins and Keene—of 10 per cent.

At the recent meeting of the Severn Valley Field Club, at Lilleshall, Mr. Jones read a paper which was of great general interest, owing to the bearing it had upon the question of the extension of the Shropshire and South Staffordshire coal fields. He observes that the Crow Hay Pits are situate about 130 yards east of the Lightmoor Fault, which is a downcast of 920 feet. These pits were started 40 years ago, with a view of winning limestone. The sinking was hard and tedious in the Permians. The old sinkers called them the limestone rocks of the district, but were convinced to the contrary when they came to the Pinney ironstone and the lower coal measures of Shropshire. It was abandoned after a head had been driven in the New Mine coal to the Lightmoor Fault, as it was the prevailing opinion in those days that no limestone would be found below the coal measures. He resumed the sinking about 20 years ago, and at 60 yards below the Little Flint coal found a band of limestone about 1 ft. thick, and at a depth of 240 yards, but the "grap" similar to the surface of the hill. Singular to say, the sinkings were comparatively dry throughout. These pits are the same distance from the Lightmoor Fault as the Granville. The Granville is 400 yards, and the Crow Hay 150 yards to the Clod coal. We have all the series at the Granville lying horizontally, at the Crow Hay the lower series only, and dipping 1 in 7; but as they recede from the Fault they will become more horizontal. The Granville winning is developing itself on all sides. The coal field is entire from there to Crow Hay and north of that, and in all probability extends for a considerable distance in an easterly direction under the New Red and Permians, containing millions of tons of coal, that will not only supply our wants, but the wants of future generations yet unborn.

NORTH STAFFORDSHIRE COAL AND IRONMASTERS' ASSOCIATION.—The quarterly meeting of the North Staffordshire Coal and Ironmasters' Association was held at the Railway Hotel, Stoke-upon-Trent, on Thursday afternoon, Mr. F. Wragge, Earl Granville's agent, in the chair. After some conversation, it was resolved that the list of prices should not be altered. The trade was reported to be dull in all its branches, but with indications of a somewhat improved demand. The finished ironmakers are not fully employed, and at the coal and ironstone works many of the pits are making short time. The question of wages led to a long discussion, and it was stated that the existing rates were such as the condition of the trade did not warrant, and which the employers could not afford to pay. Ultimately the meeting broke up, without passing any resolution on the subject, but with the understanding that another meeting would shortly be held. The committee of the Coal and Ironstone Masters' Defence Fund gave a very satisfactory report of their proceedings, and of the position of the association.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

JULY 5.—Trade in Derbyshire remains in about the same position as last noticed, the ironworks generally being in a much healthier state than in most other parts of the country, where there has been a gradual falling off for some considerable time past. The coal trade, however, continues brisk, and the Midland Railway Company are conveying a heavy tonnage to the south. Several new collieries which have just been opened out are pushing forward their top works, so as to commence drawing almost immediately. In connection with them, coke-ovens are being erected, as all coal-masters find that the small coal or smudge can be manufactured into coke, so as to realise a good profit, and meet with immediate sale. Indeed, throughout the whole of the Midland and Yorkshire coal fields the demand for coke is so large as to more than tax the powers of makers to supply. One of the main drawbacks to the full development of the capabilities of the North Derbyshire district is the want of house accommodation for the workmen, but efforts are now being made to supply that want, so that in the course of a very short time a much larger number of people will find accommodation than has hitherto been the case, so that the vast mineral wealth of that comparatively new coal field will be brought out. In the Peak mining district everything appears quiet, the drivings are being pushed forward actively, but so far the shares in the various companies remain in the same depressed state in which they have been for a long time; and, judging from latest information, there appears only a slight chance for a change taking place at present. The trade in Sheffield is anything but good, although in some of the smaller branches of the staple in which the numbers employed are comparatively few, there are a fair number of orders to hand, sufficient to keep the workmen going; still in some of the heavy branches matters have by no means improved. In heavy armour-plates, for which the town deservedly stands pre-eminent, orders are by no means equal to the ability of the makers to supply, and the trade for some time past has been falling off, yet there can be no doubt that as the season advances the demand, more particularly for the foreign markets, will increase. Manufacturers of Bessemer steel are kept fully going, and at the works of Messrs. Cammell and Co. (Limited), at Penistone, a large quantity is being put out, whilst the company find the demand for plain and manufactured steel so large, that for a considerable time past they have been extending their works, and putting on a large number of hands.

At the extensive ironstone field in Lincolnshire, close by the Trent, the furnaces in blast are kept fully going, whilst those under repair are expected to be put in towards the end of August. A large quantity of ironstone is being sent from the same place into Derbyshire and various parts of Yorkshire, where its richness in manganese is now so fully appreciated that it realises a higher price than that of almost any other in the country. The ironworks in nearly all parts of Yorkshire are in a rather depressed state, and full work just now is anything but the rule. At Elsecar the puddlers and millmen during the past week have been entirely idle, the furnaces having been put out, and, as there is a disagreement between the partners, it is hard to say when that hitherto highly thriving place will resume its former state of activity. Enjoying, as it does, a contract of an extraordinary character, so far as cheapness is concerned, in the supply of coal and ironstone from the mines of Earl Fitzwilliam, there is no establishment in England that could be more profitably worked. So favourable, indeed, was the contract made by the present Earl's father for the Messrs. Dawes, that it was a short time since tried to be upset, but without effect. Had the trial ended in favour of his lordship it would have added considerably to his annual income, so great is the difference in the price of coal and ironstone now to what it was some 20 years since, and so favourable is the mode of conveyance to all parts of the county, in a pecuniary point of view. At the Milton Works, in the same locality, there is rather more doing, although there has been some talk of opposition on the part of the puddlers to the introduction of the patent furnaces of Mr. Wilson, two of which have recently been fitted up there. It having been stated that the men were likely to strike against them, a communication was sent to Mr. G. Dawes on the subject, in which the puddlers stated that they were quite willing "to give the two furnaces of Mr. Wilson a trial for one week against two of the old ones, the four to be tried with pig-iron to suit the purposes of one of the mills. The four furnaces to be supplied with cobbles, to be weighed to all from the time they are got up until the end of the week, and be kept account of by a proper man; and, if Mr. Wilson's furnaces are proved to be the best, make more iron, and take less fuel than the old furnaces, and require no more work, we shall be agreeable to work them." However, as the furnaces have been fully tested, and proved to effect a saving of nearly one-third in fuel, at the same time turning out a superior quality of iron, it is scarcely likely that the firm will accede to the request.

The demand for both hard and soft coal in the South Yorkshire district, although not quite so active as it has been, is good for the season, and so far very few of our masters have had to stack either qualities. A large tonnage is being forwarded to Hull and Grimsby for shipment to the North of Europe, whilst a good business is being done for Leeds, Sheffield, and other iron-making localities. There is a brisk demand for coke, and stocks are taken off as soon as made. At the extensive works at Penistone, Mr. Clayton has been making some experiments, with a view of finding out the means of making the best coke for iron-smelting purposes, and the result of his labours has been the fact that an admixture of equal quantities of Barnsly steam-coal and ordinary smudge produces a coke almost unequalled for the use of furnaces. What has already been made has been fully tested at the Fordingham Ironworks, where it has given the greatest satisfaction.

Several new collieries have recently been opened out in various parts of Yorkshire, whilst others are advancing towards completion. Amongst others the coal was reached at the Newhill Colliery, near Wath, on Friday, whilst at Nostel, near Wakefield, two beds, one at 106 and the other at 130 yards depth, have recently been won.

An important concession has this week been made by the Midland Railway, by their granting through rates from the various collieries in South Yorkshire to all stations on the Eastern Counties line. The arrangement, which will be the means of opening up new markets for the produce of the district, and still farther tending to develope its vast mineral wealth, has afforded the greatest satisfaction to the colliery owners. Such being the case, it is believed that the Great Northern Company will adopt a similar course, as they are more interested in the coal trade than the Midland, and have been mainly instrumental in keeping the Great Eastern out of the field, for the purpose of perpetuating a huge monopoly.

In the Cleveland district there has been a slight improvement in the iron trade, and there is a better enquiry amongst consumers, principally for home consumption. Business is in such a state generally that masters have intimated to their blast-furnacemen that they intend enforcing a reduction of wages to the extent of 10 per cent., and notices to that effect have been posted up at several works. In the present depressed state of the trade, and the recent fall in the price of pigs, it is not unlikely that the men will submit to the reduction.

In Lancashire the demand for coal continues brisk, and, as in most other parts of the country, there is not such a large quantity stacked as is usual at this time of the year. Notwithstanding the state of the iron trade, machine, engineers, and the general iron-manufacturing establishments, are kept pretty busily employed in most of the districts. In Liverpool the market for pig-iron, as well as for bars, sheets, and rods, has been steady throughout the week.

Two one-inch bars, made for Mr. Joseph Barnes, of the Brunswick Foundry, Liverpool, by Mr. S. S. Briggs, of the Lonsdale Hematite Rolling Mills, Workington, on being tested broke at 18 tons 15 cwts., that being 6 tons 10 cwts. above the strength wanted; through this, and some other excellent qualities of iron sent to Liverpool, Mr. Briggs has received a further large order from the same gentleman, and also an order from Messrs. T. Roydon and Sons, to supply rivet iron for the largest merchant steam-vessel ever built in the Mersey.

The annual public meeting for the presentation of prizes given to the schools in the mining districts of Derbyshire, Nottingham, and Leicestershire, was held on Saturday, in the shareholders' room of the Midland Company at Derby. The number of candidates who presented themselves was 187—112 boys and 75 girls. The amount awarded in prizes was 111*l.*, which was presented to 99 candidates, in sums varying from 1*l.* to 3*l.* Mr. Francis Wright presided, and the proceedings were of a truly interesting character, the satisfactory reports of the examiner, in particular, being received with applause.

REPORT FROM MONMOUTH AND SOUTH WALES.

JULY 5.—During the past week the receipt of orders in the Iron Trade on foreign account has been small, whilst virtually no transactions have taken place on home account. The old contracts, by means of which the works have been kept going of late, are almost used up—in fact, a couple of months more will see their exhaustion at most of the principal establishments. Under such circumstances, and with only a hope of future prospects becoming better with two or three of the foreign markets, it was but natural to suppose that the general body of masters would take counsel of each other. They accordingly held a meeting, at which it was decided to effect a reduction in the rate of wages, so as to enable them to meet the expectations of buyers, in accepting orders at reduced prices, and thus assist in a measure in restoring confidence to the trade. Accordingly, on Saturday last notices were posted up at all the works informing the men that the present engagements would terminate in one month. By this means, and with a reduction in the rate of discount, it may be anticipated that orders will come in more freely, and that before long a revival of something like the old activity will characterise the trade of the district. In the foreign trade business is almost exclusively confined to the United States, Russia, and British North America, the exports to which during the past few days have been very small. The advices from America still continue reassuring as to the future, and there is a pretty general opinion prevalent that ere long some of the Indian contracts which were withdrawn will again be brought into the market. Transactions with Canada and the adjoining provinces of British North America are of a steady character; and there is also a moderate enquiry from Russia and the markets of the North of Europe. Should, however, the Northern bear be forced, by untoward circumstances, to take part in the present conflict between the eagles of Southern Europe, the effect will be seriously felt by the iron trade of this district. The enquiry for pig-iron is inactive, and it is tolerably certain that the quotations which ruled the market last quarter will not be again realised for a long time.

There is a moderate demand for Tin-Plates, and more confidence is evinced with regard to the future. There is still a strong enquiry for steam coal from abroad, principally from the continental markets, and large quantities are sent by rail to Birkenhead and the inland markets. In the consumption of house coal there is no change to record, the demand being rather quiet. Up to the present time the men employed in the Rhondda Valley have given no sign of their withdrawing the month's notice for an advance of wages; indeed, they appear as determined as ever to act upon it. There is no doubt that the proposed reduction at the ironworks, and the large number of hands which will shortly be out of employ, will bring them to their reason, and they will see the fallacy of persisting in their demands.

As stated above, on Saturday last notices were posted up at all the ironworks in the district, terminating present engagements in one month. This decision was arrived at at a meeting of South Wales ironmasters, held in London, and the intelligence created quite a sensation throughout the district, not only among the workmen, but the public generally. A reduction was anticipated, but not quite so soon, and the announcement, therefore, came quite unexpectedly. Independent of the reduction, which we hear on reliable authority will not be less than 10 per cent., a large number of hands will be thrown out of employ in consequence of the decrease in the make of iron. Considering the high rates of provisions, and the probability of their keeping up, the reduction will fall heavily upon the family household. For the labourers and spare hands there is plenty of employment to be had at the collieries, to which as yet the reduction does not apply. The class of men employed at the works are quite different to those of the past; they are much higher in the social scale, and think and reason for themselves. They now look at things, generally speaking, from a proper point of view, and there is every reason to hope that their own sense will show them the necessity of the present step being taken, and that they will fall in with the views of their employers, who have adopted the only course left open to them to keep the mills and furnaces at work without suffering severe loss; in fact, to prevent shutting them up altogether.

The extension of the Pembroke and Tenby line from Tenby to Whitland is likely to be opened at the commencement of next month. The works are being pushed forward vigorously by Messrs. Davies and Roberts, the contractors.

The workmen at the New Tredegar Colliery, in the Vale of Rhymney, have presented Mr. Burns, the manager of the works, with portraits of himself and Mrs. Burns, from the easel of Mr. W. Rosse, as a memento of their respect on his leaving the works to take up his residence in the Aberdare Valley, where he will superintend the three new pits lately taken by the Powell's Duffryn Company. There were a large party of Mr. Burns' personal friends, besides several hundred of the workpeople, present at the presentation, which was accompanied by a complimentary address, signed by the Rev. Owen Wynne Jones, Glasynys, on behalf of the workmen. The address was read by Mr. Thomas, clerk to the works, and the Rev. R. H. Morgan, in an eloquent speech, made the presentation, which was feelingly, but briefly acknowledged by Mr. Burns. Several addresses were delivered by the workmen, after which three cheers were given for Mr. Butson, the successor to Mr. Burns, and that gentleman returned thanks. In the evening the party sat down to a capital dinner at the New Tredegar Arms.

An important inquest has been held, by adjournment, at Beaufort, on the body of Ann Davies, aged 35, who was killed in the Tunnel Pit, Nant-y-Glo, while working in a stall. Mr. Rice Harris watched the case on behalf of the Nant-y-Glo Iron Works Company, and Mr. Lionel Brough, the Government Inspector of Mines, was in attendance. It appeared that the deceased was employed by a person named James Lewis, who worked under John Richards, the contractor, and that she was far advanced in pregnancy. The immediate cause of death was a fall of about 3 tons from the roof, by which the deceased was crushed. Six months ago, Mr. Henry Harris, the mineral agent, received an anonymous letter, informing him that girls were working underground. He immediately cautioned all the contractors, but it seems that, notwithstanding this, Ann Davies was permitted to work on. She used to travel considerably further than the men to get to her stall, so as to avoid detection. Mr. Brough said there had been a gross violation of the Act of Parliament. He and Mr. Harris had inspected the stall, and he thought the occurrence was purely accidental. He must lay the case before Sir George Grey, the Home Secretary, although he believed that neither Mr. Bailey nor his agents knew anything about the woman being allowed in the mines. It was, however, his bounden duty to report the case to the Government, and he should await instructions whether or not he should prosecute either or both James Lewis and John Richards. The jury returned the following verdict:—"That Ann Davies was Accidentally Killed while working underground, contrary to the Act of Parliament; and the jury recommend a more strict supervision of the works, to prevent other females from working underground."

THE TIN-PLATE TRADE.—The quarterly meeting of the members of the trade was held at the Bell Hotel, Gloucester, on Wednesday (Mr. Woodruffe, of the Machen Works, Monmouthshire, in the chair), and the trade was numerously represented, both as regards makers and buyers, there being of the latter several present from the leading houses of Liverpool, London, &c. The tone of the meeting was, upon the whole, satisfactory—perhaps more so than has been generally expected for the last few weeks. It was reported that the demand at present prices was tolerably good, and opinions were pretty unanimous that there was no cause for despondency as regard the future. The war on the Continent has interfered to some extent with the enquiry from that quarter, but, on the other hand, stocks are low everywhere, not excepting the market of the United States; and, under these circumstances, the makers look forward with confidence to a better demand. In the home market it was stated that matters were quiet, in consequence of the high price of money. There is an average number of orders on the books at the various works. It was unanimously decided to fix the price for the present quarter at 32s. per box for charcoal, IC, delivered at Liverpool, and other qualities in the usual proportion. The members, as customary, dined together after the meeting.

ON THE BEST METHODS TO PRODUCE COAL IN A MARKETABLE CONDITION.

BY MR. JOHN WARBURTON.

[Read at the Meeting of the Manchester Geological Society, June 26.]

The title given to this paper would suggest the idea that the best methods are here given, but such I do not claim to be the case. It is with a view to a thorough discussion on the subject I chose the above title, and a hope that it may incite us to a searching investigation on this very important topic. True the "exhaustion of the British coal field" has been a subject of discussion, and a theme for calculation, at intervals more or less distant during the last century. Many and various have been the calculations put forth as to the probable duration of our coal fields—indeed, so various that we find them ranging from 200 to 2000 years. The difference between the extremes certainly is very wide, and to attempt the proof of any of them would result in failure; yet to heedlessly disregard one and all of them would be sheer folly, for we are quite certain, even at the present rate of consumption, that some time or other our coal must be exhausted. With this conviction, it behoves the country, but especially the owners of mineral property, to see to the economisation of this portion of our undivided and national wealth. This economisation naturally divides itself into two distinct divisions; first, economy in the consumption; and, second, economy in the production. With the first of these I do not propose to deal, as we have so many smoke-consuming inventions, patent fire-grates and stoves, with a host of heat economisers, together with other scientific machines for the economisation of fuel. Notwithstanding all these inventions and appliances, the emissions of our tall chimneys, and the clouds overhanging our streets and villages, indicate clearly enough an imperfection on this side of the question; but this I must leave for someone else, and turn to the second, or other, side of economising our mineral wealth, and with which we, as its producers, have more especially to do—economisation in the production of coal. In most things with which we have to do, or require, the stock is kept up, and our wants supplied by a reproduction of those necessaries, as food, raiment, &c. Fortunately, or unfortunately, such is not the case with our mineral wealth, for no amount of labour would reproduce a once exhausted seam of coal. This being the case, we are, in duty to future generations, and interest to ourselves and successors, bound to produce all and every part we attempt, in the most cleanly and valuable condition possible. I may be considered bold, when I say that a large portion of our coal is not cleanly worked, nor is that which is worked or got in a very many instances produced in the most valuable condition.

The methods of working coal are almost as numerous as the mining districts of the country; it follows, then, either the requirements of the different districts render it necessary, or that some of our systems are not as good as others, or, we think the system in which we were initiated the best. This, I think, is the most likely, as no method seems to us so good as the one with which we are most acquainted, and have imbibed in our earliest mining experience; hence we find people from the North coming to Lancashire and Yorkshire, and introducing northern systems. Lancashire and Yorkshire, when carrying their systems to North and South Wales, and, as a rule, when leaving the place of their initiation, carry and introduce that they already know, for, as a matter of course, that which we know is right, and the unknown may be wrong. From this, I think, arises the diversity of opinion, more than a conviction of the merits of one system over another. In order to better understand our subject, let us suppose a lease of 300 acres of a seam of coal 5 feet thick, with its downcast and upcast shafts, together with all necessary plant for working it. We calculate the quantity of coal to be about 2,257,000 tons, but in practice we should not venture to say more than 1,800,000 tons, deducting a clear one-fifth for waste and pillars, thus taking from the 300, sixty acres, or 450,000 tons. A still further deduction do some of our leaders give, for in March, 1860, in a communication to the *Times*, we have Prof. Ansted (criticising Mr. Vivian's calculations), saying that not only one-third, which Mr. Vivian had deducted, but two-thirds should be taken off. Suppose we proceed with these calculations on the 300 acres; according to the Professor we have 750,000; Mr. Vivian, 1,5000,000; common practice, 1,800,000 tons getable, while in the bed we know there exists 2,250,000 tons. Whichever of these calculations we accept as the nearest approximation to facts, it must be humiliating, and by no means is it creditable, to the mining profession. Whilst in these calculations—let us put them in a more tangible form—we prove the coal to exist as before stated, amounting to 2,250,000 tons, supposing all this could be got in a marketable condition, and on the whole would clear for interest and redemption 1s. 6d. per ton, it would amount to 168,750*l.*; one-third got, 56,250*l.*; two-thirds, 112,500*l.*; four-fifths, 135,000*l.*, making a difference respectively of 112,500*l.*, 56,250*l.*, and 33,750*l.*, the least of which is a formidable item—33,750*l.* in only 300 acres. This loss, in some cases, as coal is let in Lancashire, Yorkshire, and the Midland Counties, would be all borne by the lessee, in some places, as South Wales, &c., the loss would be sustained by the lessee, and an additional loss by the lessor.

These calculations, we admit, may not be carried out to the figure, but I maintain it is possible to produce the coal so as not more than one-tenth need be lost or destroyed; thus reducing the loss on 2,250,000 tons to 250,000, or equivalent to 16,875*l.*, which, I am sure, is far more than is creditable to those having charge of mining operations, and enough to incite our utmost attention to find a remedy, and thus avoid this distruction of one of the prime elements of our national wealth. We can look upon it in no other light than a moral waste of Nature's stored bounties. If there is this loss, which is, by common consent, acknowledged by all connected with its operations, then what, if any, are its remedies? The most simple answer would be, work out the coal in its entirety, without destroying or depreciating its value. This, at present, we are not prepared to do, in the full sense of the term, for we must leave a portion to support the shafts, which has to be cut through in different directions, thus necessarily reducing its value; but I do say, after a sufficient support is left for the shafts, there need be little or no more ungotten coal, and what is gotten ought to be in such a manner as to reduce the waste to a minimum. What we mean by waste generally is that portion of the coal we make unmarketable by cutting it to a powder, and thus rendering it unfit for commercial purposes. Of this Mr. Basset, of Cardiff, says there is as much as 35 per cent. Mr. Warrington, of Castleford, says he has seen a case where 34 per cent. was thus wasted; if to this waste we add the amount left by way of pillars, in some mines the percentage of waste becomes something approaching Prof. Ansted's calculations.

The coal and other things being equal, the percentage of waste is highest in localities where "pillar and stall," or "pillar and benk," forms the system of working. On this system of necessity a good deal of coal is cut out in "strait" or "narrow" work, which always *does* produce a larger proportion of small coal. This is inevitable, for whenever and wherever a miner's pick comes in contact with the coal it is with the object of cutting it or dissevering it. Indeed it strikes me as marvellous that the law of divisibility was not discovered by miners, for in no art is its practice more thoroughly developed. The more of straight work there is cut out, it must follow, as a consequence, the more small coal will be made, or, in other words, more of the coal will be made small. Take, for instance, a strait place 8 ft. wide, in a 5-ft. seam, let the miner prepare 3 ft. for getting out, and you have $5 \times 8 \times 3 = 120$ cubic feet. Ere the piece is got out, 1 ft. of an average at each side must be cut out, or one side cut out and the other blasted, which, in point of producing small, is equal to both sides being cut. Then the coal must be "holed," or "kirved," or "bared" a foot high of an average. Out of the 120 cubic feet you cut $5 \times 3 + 5 \times 3 + 8 \times 3 = 54$ feet; $120 - 54 = 66$ of solid coal; but this has another operation to undergo, which, under favourable circumstances, will raise the small coal into full 55 per cent. It must be evident, then, the less of cutting there is the better will it be for the production of marketable coal.

In this cutting of coal there is another very heavy drawback; it is considered the most laborious work in a colliery, and the men who do this kind of work are the cream of the miners—hence it comes under what our economists call skilled labour, and as such requires extra pay for its performance. Thus we have it as the phrase is, "cutting both ways"—cutting it into valueless rubbish, and paying extra for it. We may carry it still further, a point very commonly lost sight of. All this small coal has to be handled by the men—that is, it has to pass through all the processes of loading, wagoning, drawing, banking, and all the rest of it, as much as good marketable coal. We are aware that in some places small coal is sent up for very little nominally, but the full value of the labour is, and must be, paid for, directly or indirectly; and if the small is left in the pit, all the labour the collier would have to do if sent out has still to be done, and, as a matter of course, must be paid for. The miner's labour is his capital, and he must be paid for the use of it, whether it is employed in producing valueless or profitable coal. Cutting coal, then, is an expensive operation without a corresponding increase in its value; contrary to most other operations, its expensiveness depreciates it value. Notwithstanding all this, there are many systems requiring so much cutting still worked that it makes one almost decide there must either be a counter advantage, or we are careless to look into the matter, or else our mines are so profitable as not to force our attention to the best means of extracting their contents in the most valuable condition. Take, for instance, a few plans of the present system, representing Lancashire, Yorkshire, Derbyshire, and South Wales. See how the two former and South Wales are cut in pieces and sections, dreadfully mutilating the coal; yet all this cutting and inter-cutting does not represent the total of the waste on that system, for a great deal of these cuttings or roads are in the same direction as the cleavage—that is, technically, the face, bord, or sicles of the coal exposed, or parallel with cuttings, consequently we find the least pressure acting upon the sides divides the coal at the line of cleavage, which in many cases is so thin as the pieces so divided break and crumble to powder by the mere turning over; and this kind of cleavage will proceed from the side of a road, sometimes 4 or 6 yards into the solid on each side of the road.

Thus, first of all, by an actual expensive operation, diminishing the value,

and then a greater diminution as a consequence of the exposure of the line of cleavage; this being the case, which few will dispute, what an amount of waste must thus be made in those districts where this plan of opening out is the system! And, strange to say, this is the system in the largest coal districts in England—as Lancashire, the North of England, Yorkshire, North and South Wales. And not only in opening out is the line of cleavage exposed, but in all the workings, or the faces, or heads, or stalls the coal is wrought with the line of cleavage, unprotected or open, and when the pressure or weight acts on the face, which it constantly does, the coal is crushed to dust. I am not at all surprised that this should have been the primitive mode of getting the coal, nor am I surprised that it is so much clung to by the miners of the present day, because the coal is dislodged with such comparative ease. When we look at all these roads with the waste in opening them, then the waste with the pressure on them, and the waste by the constant pressure on the face of the workings, it is no difficult matter to see that full 35 per cent. of the coal so worked is rendered commercially valueless. As a rule commerce rides rampant over old customs and habits, but in this particular case ease and habit take the lead, and consume a large percentage of the real value ere it finds its way into the ledger.

Revert for a moment or two to the roads or openings cut at right angles to the line of cleavage, or those where the end of the coal is exposed, you will find the pressure has not had the same effect, simply because the weight or pressure acts at right angles to the line of cleavage, thus the coal is sufficient to resist the pressure, or, if not in all cases, there being no natural cleavage, the coal breaks off in good square merchantable blocks. In this case, then, we take away one of the evils—that of exposing the line of cleavage; but we have committed one, "that of cutting the roads," which, whether cut on end or face, must destroy a portion of coal. If these statements are correct, which my experience and observation convince me is the case, what we have to do, then, is to remove as many of these destroying agencies as we practically can—cutting the coal, exposing the line of cleavage, and working with the line of cleavage constantly exposed. To leave out all these as a plan or system of working coal is by no means novel, for, in the Midland Counties, and here and there a place besides, the system of working is such as very nearly avoids all these points we have named as most destructive of our mineral wealth.

I agree in the fullest extent with Mr, Vivian, M.P., who on this question, in the House of Commons, on the 12th inst., said—"Some systems of working coal were far more economical than others, the 'pillar' system being, in his opinion, the most wasteful." I would say, then, in all seams, the quality of which being suitable for export or domestic trade, do no *cutting*, and work the coal with the end exposed, so that all the weight or pressure will act at right-angles to the natural cleavage. Do not "hole" or "kirve" in the coal, but in some underlying strata, or intervening, or even overlying bed of unsalable material. In some parts of the country a "holing clunch" is looked upon as a necessary accompaniment; hence a miner once said to me, "If coal is of vegetable origin, how is it there is always a 'holing' dirt with every seam?" His idea of it was, perhaps, the most rational, being that the coal was put there for our use, and the dirt accompanying it so as to enable us to get the coal. If we had all been brought up in that county, doubtless, we, too, should be able to find such a necessary with every workable seam of coal.

To work the coal as described would increase the cost of getting it, probably some 10 per cent., but as a set-off against this you produce the coal in a much more valuable condition, which very likely will be worth 50 per cent. more. There are certain seams of coal I would not incur the extra 10 per cent. in getting; for instance, such as are suitable in quality only for manufacturing purposes, gas coal, or coal the small of which will make a superior coke, these and inferior coals, of course, would be best worked to suit their merchantable value; but with these exceptions I would work every seam of good coal on the entire "long wall" system, and the working face at right angles to the line of cleavage, and hole in some accompanying strata. By these means, properly carried out, I assert and maintain, the waste so much complained of may be reduced from 35 per cent. to 10 per cent. Having laid these suggestions before you in a practical form, I leave them for your thought, with a hope that a healthful discussion may result in the adoption of some system that will remove from our shoulders the blame justly attributed to us, of wasting our national wealth.

[*To be continued in next week's Mining Journal.*]

The following are the Government Returns of the export of articles identified with mining, the produce and manufacture of Great Britain, for the five months ending May, 1866; and also as compared with the five months ending May 30, 1865; extracted from the "Accounts relating to Trade and Navigation," published by the Board of Trade:—

DECLARED VALUE FOR THE FIVE MONTHS ENDING MAY 31.

	1865.	1866.	Increase.
Coals and culm	£1,683,588	£1,948,110	£ 264,522
Hardware and cutlery :—			
Agricul. implements	£153,469	£200,885	
Surgical instruments	213,587	194,248	
Other sorts	1,263,020=1,630,076	1,367,759=1,762,822	132,816
Machinery :—			
Steam-engines	880,633	521,270	
Other sorts	1,342,128=2,222,761	1,139,385=1,660,655	—
Total	£5,536,425	£5,371,657	—
Metals :—Iron—Pig	567,291	580,181	
Bar	786,232	1,016,726	
Railroad	1,129,223	1,662,440	
Wire	170,150	196,194	
Ditto telegraphic	96,201	206,477	
Castings	268,781	305,347	
Hoops	505,024	768,630	
Wrought	923,149	1,112,070	
Old	4,003=4,450,054	16,047=5,864,112	1,414,058
Steel	566,721	461,136	194,415
Copper—Unwrought	95,458	258,327	
Wrought	1,136,031	747,728	
Other sorts	86,700=1,318,189	27,696=1,033,751	—
Brass	89,609	99,074	9,456
Lead—Pig	184,742	261,067	
Ore	65,441= 250,183	92,855= 353,922	103,739
Tin—Unwrought	189,731	164,182	—
Tin-plates	575,367	798,232	222,865
Zinc	37,507	50,782	13,275
Grand total	£12,713,786	£14,196,848	£2,355,155
Less decrease—			
Machinery, 562,106*l.*; copper, 284,438*l.*; tin unwrought, 25,549*l.* =			872,093
Total increase			£1,483,062

The following are the Government Returns of the Imports and Exports of Gold and Silver Bullion and Specie for five months ending May 31, 1866, from and to the undermentioned places, showing the respective results in favour of and against this country; extracted from the "Accounts relating to Trade and Navigation," published by the Board of Trade:—

DECLARED VALUE FOR THE FIVE MONTHS ENDING MAY 31, 1866.

	Imports.	Exports.	Exports over imports.	Imports over exports.
Australia	£2,180,969	£ 18,024	—	£2,162,945
Belgium	102,649	191,197	£ 88,548	—
British South Africa	3,360	—	—	3,360
British Columbia	—	—	—	—
British North America	23,409	1,994	—	21,415
Brazil	128,674	261,709	133,035	—
Egypt	20,902	2,736,271	2,715,369	—
France	792,175	2,985,529	2,193,354	—
Gibraltar	25,439	—	—	25,439
Hanse Towns	724,091	465,138	—	258,953
Holland	44,142	101,538	57,396	—
Malta	837	—	—	837
Mexico, &c.	1,968,225	53,042	—	1,915,183
Portugal, &c.	253,432	—	—	253,432
Russia	20,188	8,597	—	11,591
Spain	15,316	296	—	15,020
Turkey	71,692	—	—	71,692
United States	2,399,307	82,392	—	2,316,915
West Africa	53,346	38,442	—	14,904
"Other countries"	9,356	29,352	19,996	—
Total	£8,837,509	£6,973,521	£5,207,698	£7,071,686
Less exports over imports				5,207,698
Balance				£1,863,988

British Association for the Advancement of Science.

India Office.

THE GLYNRHONWY SLATE COMPANY (LIMITED)

LLANBERIS, CARNARVON.

Nominal capital £50,000, in 5000 shares of £10 each, 2000 of which have been issued, and £20,000 thereon fully paid-up.

Present issue of shares, 1500, being half the remaining capital.

Deposit £1 on application, and £2 on allotment.

Calls not to exceed £2 per share, at intervals of not less than three months.

The quarries held by this company, and situated on the south side of the Lake of Llanberis, have been so far developed during the last five years as to leave no doubt of the complete success of the undertaking.

The slate produced is very superior in quality, and is in great demand; and, although the very limited capital of £20,000 has been expended on the works, the profits during the past year have been upwards of £2000.

The present yield is nearly 400 tons a month, of the value of £2 6s. 8d. per ton, the sales for twelve months to March 31, 1866, amounting to £9688, as compared with £3098 in the year to March 31, 1862.

The time has now arrived when a judicious expenditure of £15,000, in erecting slab machinery and further extending the works, will unquestionably return very ample profits, the increased make of slates being estimated on reliable authority at from 1000 to 1200 tons a month, which, at the very moderate profit of 15s. per ton, will yield a dividend of from 25 to 30 per cent. on a capital of £35,000, with every prospect of further increase.

The Carnarvon and Llanberis Railway (which is expected to be completed during the present year) runs through the slate-yard of the company, and will effect a great saving of expense—about £700 a year on the present make—and will otherwise add to the great advantages which these quarries possess.

The directors have determined upon a present issue of 1500 shares only.

Prospectuses, with full details, and forms of application for shares may be had of the acting secretary, at the office of the company, 27, Bucklersbury, London; at the quay office of the company, Carnarvon; or from W. W. CRAGG, Esq., the manager at the quarries, who will afford any further information that may be required.

J. BEDDOW, Acting Secretary.

BARROW HEMATITE STEEL COMPANY

(LIMITED),

HEAD OFFICE AND WORKS,

BARROW-IN-FURNESS' LANCASHIRE.

BRANCH OFFICES,

No. 2, GREAT GEORGE STREET, WESTMINSTER.
No. 73, ST. VINCENT STREET, GLASGOW.
No. 44, QUEEN STREET, WOLVERHAMPTON.

DIRECTORS.

His Grace the DUKE OF DEVONSHIRE.—CHAIRMAN.
LORD FREDERICK CHARLES CAVENDISH, M.P.
HENRY WILLIAM SCHNEIDER, Esq., M.P.
WILLIAM CURREY, Esq.
FREDERICK ILTED NICHOLL, Esq.
JAMES RAMSDEN, Esq.—MANAGING DIRECTOR.
SECRETARY—Francis T. Rolls, Esq.
MANAGER—J. T. Smith, Esq.

This company was originally formed for the manufacture of steel under the Bessemer process, from the furnaces of Messrs. Schneider, Hannay, and Co.

The company have since arranged for the transfer to them, on the 1st January, 1866, of the Hematite Iron Ore Mines and Furnaces belonging to that firm.

In addition to the supply of iron ore and hematite pig-iron, and the manufacture of steel rails, which was the primary object of the company, they manufacture tyres and axles.

Plates for shipbuilding, boilers, girders, bridges, and roofs.

Bars, angles, guns, and forgings of every description in steel.

THE DOROTHEA WEST, GREEN, BLUE, AND RED SLATE COMPANY (LIMITED).

Registered under the Companies Act, 1862, whereby the liability of each shareholder is limited to the amount of his shares.

Capital £50,000, in 10,000 shares of £5 each.

Deposit, £1 per share on application, and £1 10s. on allotment.

DIRECTORS.

THOMAS WATERS BRITTAIN, Esq., Dagenham, Essex (Director of the Princess of Wales Slate Company, Limited).
Col. HUGH CALVELEY COTTON, Anglesey, Gosport, Hampshire.
Lieut.-Col. H. GARNET MAN, Halstead Lodge, Sevenoaks, Kent (Chairman of the Prince of Wales Slate Company, Limited).
JAMES MAW, Esq., Stratford, Essex (Director of the Llanfair Green and Blue Slate Company, Limited).
WM. WALTER, Esq., Berengrave, Rainham, Kent.

BANKERS—The National Bank, Old Broad-street, E.C.
AUDITOR—F. Bertram Smart, Esq.
GENERAL MANAGER—Mr. Thomas Harvey.
OFFICES,—33, KING STREET, CHEAPSIDE, E.C.

This company is being formed for the purpose of purchasing and extending the workings of an established and valuable quarry in Carnarvonshire, known as the Dorothea West, lying on the hill side of Nantlle Vale, and embracing and intersecting nearly all the valuable veins of slate in that district, including the celebrated Dorothea veins.

The company have agreed to purchase the quarries, which are in full work, and realising a large monthly profit, together with the plant and machinery, for the sum of £20,000, one-half of which is to be paid in cash, and the remainder in paid-up shares. This amount is far less than the capital expended in developing the quarries, and bringing them into their present profitable condition; but the original proprietors have stipulated for retaining a large interest in the company.

There are seven veins of slate in the property, of fine colour, split, and quality, the slates from which can be seen on the quay at Carnarvon, from whence they are shipped or sent off by rail to all parts. The new Charing Cross Railway Hotel, the London Bridge Hotel, and the Star and Garter Hotel, Richmond, are covered with green slates from this quarry.

The green slate from the Dorethea West has been long known as the finest in colour and quality, as well as the largest vein of green slate in Carnarvonshire. Green Duchesses are now worth £19 per thousand, or £6 6s. 8d. per ton, and other sizes bear a proportionate price, being all about double the price of the best blue, and exceeding the average price per ton of all the copper ores of Cornwall.

Full prospectuses, with reports and forms of application for the remaining shares, can be had at the company's offices. The company commenced working the quarry on the 1st January, 1866, and the profit on the total working expenses has already exceeded 40 per cent. The accounts can be seen at the offices.

This day is published, the Second Edition, revised, of

THE COAL QUESTION:

AN INQUIRY CONCERNING THE PROGRESS OF THE NATION AND THE PROBABLE EXHAUSTION OF OUR COAL MINES.

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Cobden Professor of Political Economy in Owens College, Manchester.

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HOPTON'S CONVERSATIONS ON MINES BETWEEN "A FATHER AND SON." Second edition, improved, revised, and enlarged from 112 to 174 pages. Surveying mines with the the theodolite and the dial, and also laying workings on plan, illustrated; with numerous plans on ventilation and the working of mines. Price 2s. 6d.

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By THOMAS SFARGO, Mining Engineer, Stock and Sharebroker, Gresham House, Old Broad-street, London, E.C.

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THE MINERS' MANUAL OF ARITHMETIC AND SURVEYING.

By WILLIAM RICKARD,

Teacher of Practical Mining in the late Mining School of Cornwall, and Principal of the Engineering Academy, 36, Upper Parliament-street, Liverpool.

Truro: Heard and Son.—London: Longman and Co.; the office of the MINING JOURNAL, 26, Fleet-street; of the author, and of all booksellers.

RAILWAYS AND MINES.—Capitalists who seek safe and profitable investments, free from risk, should act only upon the soundest information. The market prices for the day are for the most part governed by the immediate supply and demand, and the operations of speculators, without reference to the *bona fide* merits of the property. Railways depend upon the traffic, expenditure, and capital accounts, the probabilities of alliance or competition with neighbouring companies, the creation of new shares, the state of the Money Market as affecting the renewal of debentures, and other considerations founded on data to which those only can have access who give special attention to the subject. Mines afford a wider range of profit than any other public securities. The best are free from debt, have large reserves, and pay dividends bi-monthly varying from £10 to £15 per cent. per annum. Instances frequently occur of young mines rising in value 400 or 500 per cent. But this class of security, more than any other, should be purchased only upon the most reliable information. The undersigned devote special attention to Railways and Mines, afford every information to capitalists, and effect purchases and sales upon the best possible terms. Thirty years' experience in mining pursuits justifies us in offering our advice to the uninitiated in selecting mines for investment.

MESSRS. TREDINNICK AND CO.,

No. 78, LOMBARD STREET, LONDON, E.C.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE NEW TRELEIGH MINE.

TO BE SOLD, pursuant to an Order made in a Cause Nicholson v. Walls and Others, dated the 13th day of March last, at the Registrar's Office, at Truro, on Wednesday, the 18th day of July inst., at One o'clock in the afternoon precisely,

30 (5775ths) PARTS or SHARES of the defendant William Pool, and
30 (5775ths) PARTS or SHARES of the defendant John Solomons,

Of and in the said MINE.

JOHN GILBERT CHILCOTT, Truro
Dated Registrar's Office, Truro, July 3, 1866. (Plaintiff's Solicitor).

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WENDRON CONSOLS MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 9th day of June inst., presented to the Vice-Warden of the Stannaries, by Frederick Hill, a contributory of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the College Hall, Exeter, on the 14th day of July next, at Two o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavits verifying the same, from the petitioner, his solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 11th day of July next, and notice thereof must at the same time be given to the petitioner, his solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall
(Solicitors for the Petitioner).
Messrs. BOLTON AND GRYLLS HILL, 4, Elm-court, Temple, London
(Agents of the said Solicitors).

Dated Truro, June 19, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH WHEAL VOR MINING COMPANY.—By the direction of his Honour the Vice-Warden, notice is hereby given that, on Tuesday, the 17th day of July inst., at the Registrar's Office, at Truro, in the county of Cornwall, at Eleven o'clock in the forenoon, this Court will PROCEED to MAKE a CALL of ONE POUND THREE SHILLINGS AND FOURPENCE PER SHARE on all the contributories settled on the list of contributories of the said company under Class A.

All persons interested therein are entitled to attend at the time and place aforesaid, to offer objections to such call. WM. MICHELL, Registrar.

Dated the 3d day of July, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the BURRA BURRA MINING COMPANY.—By the direction of his Honour the Vice-Warden, notice is hereby given that, on Wednesday, the 18th day of July inst., at the Registrar's Office, at Truro, in the county of Cornwall, at Eleven o'clock in the forenoon, the Court will PROCEED to MAKE a CALL of TWO SHILLINGS PER SHARE on all the contributories settled on the list of contributories of the said company under Class A.

All persons interested therein are entitled to attend at the time and place aforesaid, to offer objections to such call. WM. MICHELL, Registrar.

Dated the 3d day of July, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL HEARLE MINING COMPANY.—TO BE SOLD, under the direction of the Registrar of the said Court, BY PUBLIC AUCTION, on Tuesday, the 24th day of July instant, at Eleven o'clock in the forenoon, at the WHEAL HEARLE MINE, in the parish of St. Just, in Penwith, within the said Stannaries, either together or in lots, the MINE SETTS or GRANTS of the said company, and a large quantity of MINING MACHINERY and MATERIALS, including—

ONE 30 in. cylinder PUMPING ENGINE, with ONE BOILER 9 tons, with 24 head stamps, iron axle, 1 balance-bob, 30 ft. beam wood, several fathoms of wood and skip rods, pumps, wire-rope, chain ladders, &c.

A 10 in. cylinder WINDING ENGINE, with BOILER about 6 tons, with 300 fms. chain, 9-16ths.

A quantity of smiths' and miners' tools, ladders, launders, timber, steel, with small iron crane, several wood sheds, carpenters' shop and materials, powder, safety-fuse, account-house and office furniture, and a variety of other articles and effects in general use in mines.

Further particulars may be had on application to Mr. BELLINGHAM, the officer of the Court in possession.

BORLASE AND MILTON, Solicitors, Penzance.
HODGE, HOCKIN, AND MARRACK, Truro
(Agents of the said Solicitors),

Dated Registrar's Office, Truro, July 4, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WEST CLIFFORD UNITED TIN AND COPPER MINING COMPANY (LIMITED).—ALL CREDITORS or CLAIMANTS of the ABOVE-NAMED COMPANY who have not received notice from the Registrar of the said Court that their claims have been already admitted, are hereby REQUIRED to COME IN and PROVE THEIR SEVERAL DEBTS or CLAIMS at the Registrar's Office, Truro, on or before the 20th day of July inst., or in default thereof they will be excluded from the benefit of any distribution made before such proof.

And for the purpose of such proof they are either to attend in person, or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court at Truro, such affidavits being sworn either before some Commissioner of the said Court, or before any Court, Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WILLIAM MICHELL, Registrar of the above-named Court,
Truro, Cornwall.

Dated the 5th day of July, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the GODOLPHIN HILL MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 21st day of June last, presented to the Vice-Warden of the Stannaries, by William John Rawlings, a creditor of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the College Hall, Exeter, on Saturday, the 14th day of July instant, at Two o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitors, or agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner, his solicitors, or agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 11th day of July inst., and notice thereof must at the same time be given to the petitioner, his solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall
(Solicitors for the Petitioner).
GREGORY AND ROWCLIFFE, of No. 1, Bedford-row, London
(Agents of the said Solicitors).

Dated Truro, July 3, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the OLD GUNNISLAKE MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 29th day of June last, presented to the Vice-Warden of the Stannaries by Christopher Vickry Bridgman and Christopher Vickry Bridgman, the younger, creditors of the company, and that the said petition is directed to be heard before the Vice-Warden, at No. 18, Thurloe-square, Brompton, London, on Friday, the 13th day of July inst., at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or agents, of his intention to do so, such notice to to be forthwith forwarded to P. P. Smith, Esq., secretary to the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioners, or their solicitors, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 10th day of July next, and notice thereof must, at the same time, be given to the petitioners, their solicitors, or agents.

CARLYON AND PAULL
(Truro, Cornwall, Solicitors for the Petitioners).
Messrs. GREGORY AND ROWCLIFFES
(No. 1, Bedford-row, London, Agents of the said Solicitors).

Dated Truro, July 3, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE SPEARN MOOR MINE.

TO BE SOLD, pursuant to an Order made in a Cause Higgs v. Hobson and Others, dated the 5th day of June last, at the Registrar's Office, at Truro, on Wednesday, the 18th day of July inst., at One o'clock in the afternoon precisely,

10 (280ths) PARTS or SHARES of the defendant Campbell Wright Hobson; and
13 (280ths) PARTS or SHARES of the defendant Stephen Fryer Gillum,

Of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Plaintiff's Solicitors, Truro.

Dated Registrar's Office, Truro, July 5th, 1866.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE NORTH LEVANT MINE.

TO BE SOLD, pursuant to an Order made in a Cause Higgs and Another v. Thomas and Others, dated the 4th day of June last, at the Registrar's Office, at Truro, on Wednesday, the 18th day of July inst., at One o'clock in the afternoon,

5 (2000ths) SHARES or PARTS of the defendant Thomas E. W. Thomas,
5 (2000ths) SHARES or PARTS of the defendants Frances Knight Vivian, and her husband William Cock Vivian,
5 (2000ths) SHARES or PARTS of the defendant Thomas Spencer,
5 (2000ths) SHARES or PARTS of the defendant James Lysah,
5 (2000ths) SHARES or PARTS of the defendant Henry Oman,
5 (2000ths) SHARES or PARTS of the defendant Joseph Gregory,
20 (2000ths) SHARES or PARTS of the defendants Frances Knight Vivian Vivian, as administratrix of Edwin Godfrey Scholey Gurney, deceased; and
2 (2000ths) SHARES or PARTS of the defendant Frances Knight Vivian Vivian, as executrix of Frances Knight Gurney, deceased,

Of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Truro
(Agents for Rodd and Cornish, Plaintiffs' Solicitors, Penzance).

Dated Registrar's Office, Truro, July 5th, 1866.

IRONWORKS FOR SALE BY AUCTION.

MESSRS. BARNARD, THOMAS, AND CO. have received instructions to SELL, BY PUBLIC AUCTION, at the Royal Hotel, Cardiff, on Tuesday, the 10th of July, 1866, at Twelve for One o'clock, in one lot, the VALUABLE IRONWORKS, ROLLING MILLS, &c., known as the COLLEGE IRONWORKS, near CARDIFF, for some years past carried on by Mr. Richard Lumley, for the manufacture of small rails and merchant bars.

This property is most advantageously situated on the Glamorganshire Canal, three miles from Cardiff, three-quarters of a mile from the Llandaff Station, and within three miles of the Walnut-Tree Bridge Junction of the Taff Vale and Rhymney Railways, thus having direct communication with both the broad and narrow guage systems.

The PLANT and MACHINERY include puddling and heating furnaces, rolling mills, &c., with the usual appliances.

The tenure is leasehold; the chief portion being held for an unexpired term of 67 years, at a rental of £40, and the remainder for 35 years, at a rental of £12. The works cover three acres of ground.

The whole is in full working order, and may be viewed, and other particulars obtained, on application either to Messrs. GROVER and DAVIS, solicitors, Cardiff; or to the Auctioneers, at their offices in Bristol, Cardiff, or Swansea.

4, Crockherbtown, Cardiff, June 26, 1866.

CARMARTHENSHIRE.

VALUABLE FREEHOLD ESTATES, in the parish of Llanon, about five miles from the flourishing town and seaport of Llanelly, comprising the FARMS called CURN HOWELL, CWMLETTYLEDREW, MUDDLESCOMBE, MORLAIS, PENDERY WELL, GELLYRHWYDD, BANKMAUR, and DILDRA, containing together 522 acres, rich in MINERALS, and with suitable RESIDENCES and HOMESTEADS. Possession at Michaelmas.

MESSRS. DRIVER AND CO. are instructed to SELL, BY AUCTION, on Thursday, the 9th August, in five lots, at the Ship and Castle Hotel, Llanelly, at Five for Six o'clock precisely, the above VALUABLE PROPERTIES.

Full particulars and conditions of sale, with plans, are in preparation, and may shortly be had at the Ship and Castle, Llanelly; the Mackworth Arms, Swansea; the Estate Exchange, Change-alley, Cornhill; of Messrs. PARTRIDGE and EDWARDS, solicitors, King's Lynn; of Mr. EDWARD BAGOT, C.E., Llanelly; and of Messrs. DRIVER and Co., surveyors, land agents, and auctioneers, No. 4, Whitehall.

VALUABLE TIN MINE, LEASES, MACHINERY, AND PLANT.

TO BE SOLD, BY PRIVATE TREATY, the MINE, MACHINERY, and MATERIALS in and belonging to the GRYLLS WHEAL FLORENCE MINE, situate in the parish of Perranuthnoe, and county of Cornwall, comprising a 30 in. cylinder ROTARY STEAM ENGINE, with an 8 ton BOILER, large fly-wheel, fitted with 12 heads of stamps complete; also connections for pumping, &c., and 40 fms. of 9 and 10 in. pitwork, 100 fms. horizontal connecting rods, shaft and balance-bobs, capstan and shears, capstan rope 25 cwts., launders and stands, 2 horse whims, dressing-floors and apparatus; smiths' bellows, anvils, and tools; miners' tools, steel, new and old timber.—The whole to be inspected on application to Capt. EDWD. ROGERS, on the mine; and prices and terms obtained at the offices of the company, St. Michael's House, St. Michael's-alley, Cornhill, London. JEHU HITCHINS, Sec.

June 29, 1866.

ECTON MOUNTAIN, STAFFORDSHIRE.

FOR SALE, BY PRIVATE CONTRACT, LEASE and TACK-NOTE of MINING SETTS (LEAD and COPPER) in the above celebrated mineral hill. The setts are extensive, and may be cheaply worked; they contain several shafts, levels, &c.

Also TO BE SOLD with the above, or separately, a quantity of MINING PLANT and MATERIALS, including tram rails, wagons, stamping mill, &c.

For particulars, apply to Messrs. BENHAM and TINDELL, solicitors, 18, Essex-street, Strand, London; or to Mr. J. MATHER, accountant and agent, Manchester Chambers West, Manchester.

COLLIERY.

FOR SALE, BY PRIVATE CONTRACT, a very desirable COLLIERY PROPERTY in WALES. It has been recently opened by level and slant on two veins, one of which has long been on the Admiralty list, and is in high repute for steam purposes. Underground roads and airy communications are so far completed that upwards of 100 tons of coal per day can be immediately raised, and this quantity can be doubled in a short time with very little additional expense. There are excellent surface railroads and siding accommodation, giving the colliery direct access to three shipping ports. The property is on the main trunk line of communication between Swansea, Liverpool, and the North.—For detailed particulars, and to treat, address "X. Y. Z.," Mr. Osmond's, stationer, 29, Ironmonger-lane, Cheapside, London.

IRELAND.

COAL AND IRON FIELD IN THE COUNTY OF ANTRIM.—TO BE LET, in one or more lots or divisions, the EXTENSIVE MINERAL FIELD at MURLOUGH BAY, near BALLYCASTLE, the property of the Earl of Antrim, comprising an area of several square miles, with a sea frontage of considerable extent, and eligible sites for shipping places and harbours, and containing several valuable MINES of COAL, IRONSTONE, and other MINERALS, including the blackband, fire-clay, limestone, freestone, and every requisite for the establishment of blast-furnaces. In the adjoining land iron and coal mines are at present worked by Messrs. Merry and Cunninghame.

For further particulars, apply to ALEXANDER M'DONALD, Esq., Glenarms N. Ireland.

LEAD MINE, NEAR CARSPHAIRN, STEWARTRY of KIRKCUDBRIGHT.

TO BE LET, for such a number of years as may be agreed upon the WOODHEAD LEAD MINE, on the CRAIGENGILLAN ESTATE, situated in the parish of Carsphairn and stewartry of Kirkcudbright.

This mine was opened by the late proprietor in 1838, and since then has yielded upwards of 6500 tons of lead of the finest quality. The plant, machinery, &c., can be had at a valuation.

Mr. CHARLES WILSON, manager at the mines, will show the underground workings, as also the plans and sections; and for further particulars application may be made to ALEXANDER SMITH, Esq., W.S., 18, York-place, Edinburgh; or to Mr. KENNEDY SMITH, Berbeth Mains, Daimellington, Ayrshire.

Berbeth, June 26, 1866.

GUN COTTON FOR BLASTING.—The extended use of this material has enabled the manufacturers to issue a new List, showing a LARGE REDUCTION IN PRICE; and they now beg to call the attention of those interested in MINING and BLASTING OPERATIONS to the GREAT SAVING in TIME and COST which may be effected by the introduction of gun-cotton.

Directions for use and full particulars obtained upon application to
THOMAS PRENTICE AND CO.,
173, FENCHURCH STREET, LONDON; or
GUN COTTON WORKS, STOWMARKET.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON AND CO., PENHALLICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED to EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE, upon warrant that it will prove equal to, if not better than, any to be procured elsewhere.

RED LION HOTEL, TRURO.—OLD-ESTABLISHED FIRST-CLASS FAMILY, COMMERCIAL, AND POSTING HOUSE.—In returning thanks to the nobility, gentry, commercial gentlemen, and the public generally for their patronage for many years past, MRS. DOBB begs to inform them that no effort on her part will be wanting to afford every comfort, and thus obtain a continuation of their support.

Superior accommodation to families, tourists, and mining gentlemen travelling on business or pleasure, at moderate charges. Ladies' and gentlemen's coffee and private sitting-rooms. Table d'hote daily. First-class cooks.

Dog-carts, wagonettes, and carriages of all descriptions. Hearse and mourning-coaches. Excursion and railway omnibuses.

Orders for weddings, funerals, or posting, promptly attended to. Stock and show-rooms for commercial purposes. An omnibus to meet every train.

International Exhibition, 1862—Prize Medal.

JAMES RUSSELL AND SONS (the original patentees and first makers of wrought-iron tubes), of the CROWN PATENT TUBE WORKS, WEDNESBURY, STAFFORDSHIRE, HAVE BEEN AWARDED a PRIZE MEDAL for the "good work" displayed in their wrought-iron tubes and fittings.
Warehouse, 81, Upper Ground-street, London, S.

BICKFORD'S PATENT SAFETY-FUSE OBTAINED the PRIZE MEDALS at the ROYAL EXHIBITION of 1851, at the INTERNATIONAL EXHIBITION of 1862, in London, and at the IMPERIAL EXPOSITION held in Paris, in 1865.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—
EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

Prize Medal—International Exhibition, 1862.

CHAPLIN'S PATENT PORTABLE STEAM ENGINES, &c.,
FOR PUMPING AND WINDING.

These engines are SPECIALLY ADAPTED for PITS, QUARRIES, &c. They are EXCEEDINGLY SIMPLE in ARRANGEMENT and STRONG. NO FOUNDATION or CHIMNEY STALK being NECESSARY, they can be ERECTED or REMOVED with VERY LITTLE TROUBLE or EXPENSE, and are WELL ADAPTED for HOME or FOREIGN USE.
Sizes, from 2 to 25-horse power.

STEAM CRANES, STEAM WINCHES, CONTRACTORS' LOCOMOTIVES, HOISTING ENGINES, PUMPING AND WINDING GEARING, &c.

ALEXANDER CHAPLIN AND CO.,
CRANSTONHILL ENGINE WORKS, GLASGOW.

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9, ADAM STREET, ADELPHI, LONDON, W.C.
DEPOT.
LOWER FORE STREET, LAMBETH, S.
(Near the steamboat pier.)

THOMAS TURTON AND SONS,

MANUFACTURERS OF
CAST STEEL for PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL	FILES MARKED
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Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.,
Where the largest stock of steel, files, tools, &c., may be selected from.

Patent Flat and Round Wire and Hemp Ropes, &c.

JOHN AND EDWIN WRIGHT, PATENTEES,
CITY OFFICE, 19, LONDON STREET, E.C.
ESTABLISHED 1770.
Manufacturers of every description of
IMPROVED PATENT FLAT AND ROUND WIRE ROPES,
From the very best quality of charcoal iron and steel wire.
PATENT FLAT AND ROUND HEMP ROPES.
SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel), WIRE, HEMP, FLAX, ENGINE YARN, COTTON WASTE, &c.
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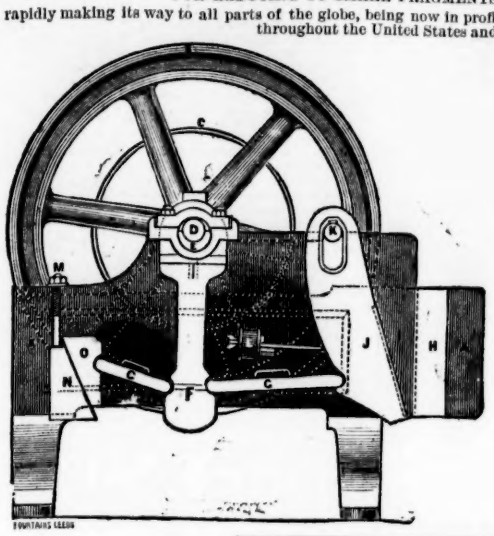

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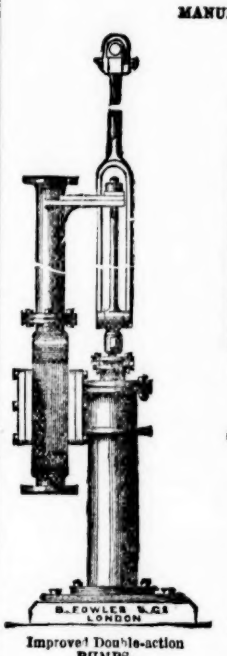

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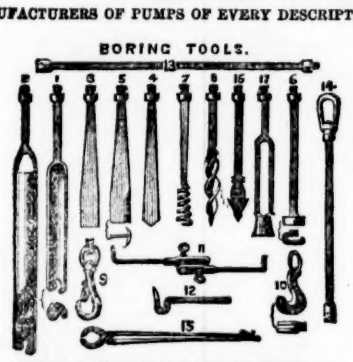

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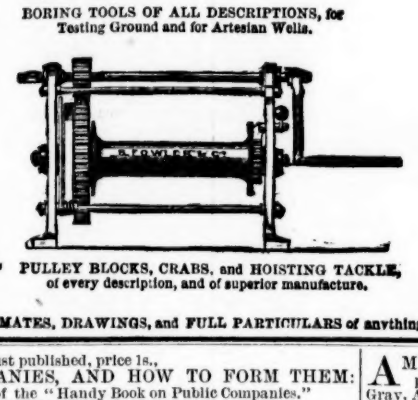

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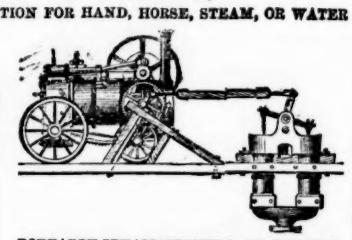

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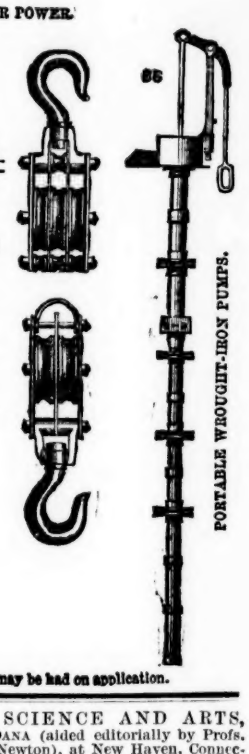

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THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764.)
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THE STOCKTON AND HARTLEPOOL MERCURY AND MIDDLESBOROUGH NEWS (published at Hartlepool) is eminently the organ of the Coal, Iron, and Iron Shipbuilding Trades in the extensive Mining and Maritime District of South Durham and Cleveland, with which it has been closely identified since its origin. The "Mercury" was for years the only newspaper published in South Durham and Cleveland, and is yet the only one published more than once a week. Advertisements to be forwarded to the publisher, Mr. JOHN H. BELL, Southgate, Hartlepool.

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BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
200	Botallack, t, c, St. Just	91 5 0	—		488 15 0	5 0 0	May, 1866
10000	British Slate Company	8 0 0	—		9 per cent.		Mar. 1866
1000	Bronfloyd, l, Cardigan*	12 0 0	—		8 1 0	0 6 0	May, 1866
916	Cargoll, s-l, Newlyn	15 5 7	18		13 15 0	1 0 0	Feb. 1866
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		20 18 0	1 0 0	July, 1866
128	Cwmystwith, l, Cardiganshire	60 0 0	—		352 10 0	5 0 0	April, 1866
280	Derwent Mines, s-l, Durham	300 0 0	—		162 0 0	2 10 0	Mar. 1866
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	—		1024 0 0	7 0 0	May, 1866
358	Dolcoath, c, t, Camborne	128 17 6	—		813 10 0	1 0 0	June, 1866
6144	East Caradon, c, St. Cleer†	2 14 6	7¼	7 7½	14 3 0	0 5 0	Jan. 1866
300	East Darren, l, Cardiganshire	32 0 0	—		113 10 0	2 0 0	May, 1866
128	East Pool, t, c, Pool, Illogan	24 5 0	—		374 10 0	5 0 0	May, 1866
5000	East Rosewarne, c, t, Gwinear	2 15 0	1⅛		0 10 6	0 1 6	Jan. 1866
1906	East Wheal Lovell, t, Wendron	3 9 0	7	6 6½	2 7 6	0 7 6	May, 1866
2800	Foxdale, l, Isle of Man*	25 0 0	—	23	68 10 0	0 10 0	June, 1866
5000	Frank Mills, l, Christow	3 18 6	—		3 5 6	0 5 0	Feb. 1866
15000	Great Laxey, l, Isle of Man*	4 0 0	21	19½ 20½	4 15 0	0 10 0	June, 1866
5908	Great Wheal Vor, t, c, Helston†	40 0 0	18½	19 20	10 0 0	0 10 0	June, 1866
1024	Herodsfoot, l, near Liskeard†	8 10 0	40	35 37	37 10 0	1 10 0	June, 1866
6000	Hingston Down, c †	5 10 6	—		0 10 0	0 5 0	April, 1866
400	Lisburne, l, Cardiganshire, Wales	18 15 0	—		470 0 0	3 0 0	May, 1866
9000	Marke Valley, c, Caradon	4 10 6	4	3¾ 4	3 5 0	0 2 6	Jan. 1866
3000	Minera Boundary, l, Wrexham*	1 0 0	—		0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co. l, Wrexham*	25 0 0	—		198 3 0	5 0 0	May, 1866
40000	Mwyndy Iron Ore*†	3 0 0	—		0 6 6	0 2 6	Mar. 1866
600	Pant-y-Glien, sl.*	20 0 0	—		10 per cent.		May, 1866
200	Parys Mines, c, Anglesey*	50 0 0	—		157 0 0	5 0 0	Jan. 1866
1120	Providence, t, Uny Lelant†	10 6 7	23	22 24	80 17 6	0 10 0	May, 1866
512	South Caradon, c, St. Cleer†	1 5 0	—		524 10 0	7 0 0	May, 1866
6000	South Darren, l*	3 6 6	3¼		0 5 6	0 2 6	June, 1866
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	10	10	18 1 0	1 0 0	Jan. 1866
3000	W. Chiverton, l, Perranzabuloe†	—	70	67 70	11 7 6	1 15 0	May, 1866
400	West Wheal Seton, c, Camborne†	47 10 0	120	100 110	456 4 0	3 0 0	June, 1866
512	Wheal Basset, c, Illogan†	5 2 6	—	70 75	620 0 0	1 0 0	June, 1866
1024	Wheal Friendship, c, Devon	20 0 0	—		300 0 0	1 0 0	Mar. 1866
4295	Wheal Kitty, t, St. Agnes	5 4 6	—		2 19 0	0 1 6	May, 1866
2000	Wheal Rose, c, Scorrier	—	15		1 0 0	0 10 0	Feb. 1866
396	Wheal Seton, t, c, Camborne	58 10 0	170	140 150	226 15 0	5 0 0	April, 1866
1040	Wheal Trelawny, s-l, Liskeard†	5 17 0	14		54 0 6	0 5 0	June, 1866

BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1055	Craddock Moor, c, St. Cleer	10 4 0	—		7 12 0	0 4 0	June, 1865
1200	Bryn Gwyn, l, Mold*	9 0 0	—		3 3 6	0 13 6	Aug. 1865
2880	Clifford Amalgamated, c, Gwen...	30 10 0	5½	5 5½	35 6 0	0 10 0	June, 1865
6000	East Carn Brea, c, Redruth	3 15 0	1⅛	¾ 1	0 5 0	0 5 0	June, 1865
20000	Mining Co. of Ireland, c, l, cl.	7 0 0	17½		19 18 11	0 16 1	July, 1865
6000	New Birch Tor and Vitifer Cons. t	1 6 6	—		0 13 0	0 2 0	Oct. 1865
6000	West Basset, c, Illogan†	1 10 0	—		26 14 0	0 5 0	July, 1865
1024	Wheal Exmouth, l, Christow	—	—		—	0 2 6	Oct. 1865
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	3½		59 17 6	0 10 0	Mar. 1865
7000	Wicklow, c, Wicklow*	2 10 0	22¼		15 11 0	0 11 0	Nov. 1865

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
15000	Cape Copper Mining*†	7 0 0	9¾	8¾ 9¼	2 12 6	0 10 0	April, 1866
1500	East Indian Coal, Calcutta	10 0 0	—		—	—	
25000	Fortuna, l, Spain*†	2 0 0	2¾	2¼ 2¾	1 3 4	0 3 0	Feb. 1866
10000	Gonnessa, l,* [5000 £5 pd., 5000 £2 pd.]	—	—		7½ per cent. per annum.		
15000	Linares, t, Spain*†	3 0 0	2½	1½ 2	11 6 4	0 5 0	Jan. 1865
9275	New Wildberg, l	2 0 0	—		0 12 0	0 2 0	Aug. 1865
50000	Panulcillo, c*†	3 0 0	3½	2¾ 3¼	10 per cent.		Yearly.
10000	Pontgibaud, s-l, France†	20 0 0	6	6 8	2 19 8	0 16 8	Dec. 1865
97500	Port Phillip, g, Clunes†	1 0 0	¾	½ ¾	0 14 6	0 1 0	Jan. 1866
20000	Scottish Australian Mining Co.†	1 0 0	⅞		0 0 3	0 0 3	Jan. 1866
11000	St. John del Rey, Brazil*†	15 0 0	—	48 50	68 15 0	4 0 0	June, 1866
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 0	0 1 0	Jan. 1866
40000	West Canada Mining Company*	1 0 0	—		0 19 6	0 2 6	May, 1865

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
10000	Alten and Quænangen United, c*	4 10 0	—		4 5 0	0 15 0	Nov. 1853
20000	Australian, c, South Australia†	7 7 6	—		0 1 0	0 1 0	Dec. 1863
2464	Burra Burra, c, South Australia.	5 0 0	—		325 0 0	5 0 0	Dec. 1864
12000	Cobre Copper Company, c, Cuba†	40 0 0	14	11 13	101 0 0	1 0 0	Jan. 1865
10000	Copiapo Mining Company, Chili†	16 0 0	—		6 18 0	0 10 0	Nov. 1862
100000	Don Pedro No. del Rey, Brazil*†	0 14 0	—	17s. 20s.	0 0 9	0 0 9	Dec. 1863
70000	English and Australian, c	5 0 0	—		1 12 0	2 0 0	Aug, 1864
25000	Gen. Mining Assoc., Nova Scotia†	20 0 0	21	19 21	21 0 0	1 0 0	June, 1864
68000	Kapunda Mining Co., Australia†	1 0 0	⅝		0 12 0	0 1 0	June, 1864
10000	Lusitanian (Portugal)†	2 10 0	—		1 7 0	0 3 0	June, 1865
103815	Mariquita and New Granada†	1 0 0	—		0 9 6	0 1 6	July, 1859
43174	United Mexican, s, Mexico	28 5 0	2	1½ 2	2 19 0	0 5 0	Sept. 1864
10000	Vancouver, cl*†	5 0 0	4		0 15 0	0 5 0	Nov. 1864
45000	Yudanamutana, c, S. A.*†	3 0 0	¾	½ ¾	0 5 0	0 5 0	Aug. 1863

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
35000	Alamillos, l, Spain*†	2 0 0	1¾	1¼ 1¾	Fully pd.
100000	Anglo-Brazilian, g*†	0 8 0	—		Dec. 1863
25000	Capula, s, Mexico*†	1 8 0	—	⅞	Feb. 1864
30000	Chontales, g, s, Nicaragua*†	2 0 0	4¼	3¼ 3¾	April, 1866
10000	Copiapo Smelting, Chili*	10 0 0	—		April, 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
50000	East del Rey, g, Brazil*†	2 15 0	—		June, 1866
15000	El Chico Silver Mining and Reduction Company*	4 10 0	—		Jan. 1866
8000	English and Canadian Mining Company*	5 0 0	—		Fully pd.
40000	Fortune, c, West Australia*	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 5 0	¾	⅜ ½	Jan. 1866
80000	Great Northern, c, South Australia*†	1 11 0	—		June, 1862
10000	Great Barrier Land, Mining, &c., New Zealand*	5 0 0	—		Fully pd.
12000	Nerbudda Coal and Iron* [6000 £5 pd., 3000 £3 pd.]	—	—		Aug. 1865
50000	Nova Scotia Land and Gold*	1 15 0	—		Sept. 1865
15000	Otea, c, New Zealand* [5000 fully paid]	1 10 0	—		April, 1866
15000	Pachuca Silver Mining Company, Mexico*	1 0 0	—		June, 1863
6000	Peel River Land and Mineral*†	100 0 0	42		Stock.
30000	Pestarenna, g*	—	—		
23000	Quebrada, c, Venezuela*†	10 0 0	—		Fully pd.
10178	Rhenish Consolidated, l [6000 £5 pd., 4178 £2 10s. pd.]	—	—		May, 1866
50000	Rossa Grande, g, Brazil*	5 0 0	—		April, 1864
15000	San Pedro del Monte, s, Mexico*	3 0 0	—		Jan. 1866
10000	San Roque, l, Spain	5 0 0	—		Fully pd.
30000	Val Antigoria, g*†	0 10 0	¾	½ ¾	
6000	Val Sassam, s, c, l*	5 10 0	—		April, 1866
5000	Valgodemard Mining Company*	20 0 0	—		Fully pd.
50000	Vallanzasca, g, Italy*†	0 12 6	—		Oct. 1864
45000	Victor Emanuel, c, Italy*	1 0 0	—		Fully pd.
20000	Washoe, g, [10000 £5 pd., 10000 £4 pd.]	—	—		
80000	Worthing, c, South Australia*†	1 0 0	⅝	⅜ ⅝	Fully pd.
7500	Yorke Peninsula, South Australia	1 0 0	—	¼	Fully pd.

BANKS AND FINANCIAL COMPANIES.

Shares.	Banks.	Paid.	Last Pr.	Bus. done.
40000	Alliance*†	25 0 0	22	22 24
40000	Australian Mort. Land and Finance†	5 0 0	4¼	3¾ 4¼
30000	Australasia†	40 0 0	65	65 67
10000	Bank of Egypt†	25 0 0	30	
25000	Bank of Otago*†	10 0 0	7	
20000	Bank of Victoria, Australia†	25 0 0	41	38 41
50000	Bank of New Zealand†	10 0 0	18	17 18
10000	Bank of Queensland*†	25 0 0	8	
50000	Brazilian and Portuguese*†	10 0 0	9	8 9
8915	Canada Company†	32 10 0	80	77 80
50000	Canadian Loan and Investment*†	2 10 0	—	
40000	Chart. Bank India, Aust. & China†	20 0 0	18	17 19
30000	Char. Merc. India, Lond. & China†	25 0 0	31	32 34
50000	City†	10 0 0	17	16 18
20000	Colonial†	25 0 0	43	41 43
40000	Company of African Merchants.*†	3 0 0	3	2½ 3
150000	Consolidated Bank*†	4 0 0	4	4¾ 5¼
100000	Credit Foncier and Mobilier of England*†	5 0 0	3¾	3⅞ 4⅛
10000	Discount Corporation*†	20 0 0	8	6 8
20000	East London*†	5 0 0	3½	2½ 3½
30000	English, Scottish, & Aust., Chart.†	20 0 0	17	17 19
20000	English and Swedish*†	20 0 0	14	12 14
250000	General Credit and Finance of London*†	6 0 0	4¼	4⅛ 4⅜
20000	Imperial Bank*†	20 0 0	26	26 28
150000	International Financial Society*†	5 0 0	3⅛	3⅛ 3⅜
200000	International Land Credit*†	6 0 0	3½	2½ 3½
4000	London African Trading*†	10 0 0	5	
50000	London Chartd. Bank of Australia†	20 0 0	21	20½ 21½
37500	London and County†	20 0 0	67	65 67
40000	London Financial Association*†	25 0 0	6	8¼ 8¾
72000	London Joint-Stock†	15 0 0	45	44 46
5000	London Mercantile Discount*†	10 0 0	—	
10000	London and South-Western*†	20 0 0	14	15 17
50000	London and Westminster†	20 0 0	93	92 94
50000	Mercantile and Exchange*†	11 10 0	—	
17156	Metropolitan and Provincial*†	20 0 0	15	13 15
30000	Mineral Rights Association*	1 0 0	1⅛	
20000	National of Australia†	4 0 0	6½	5¾ 6½
20000	National of Liverpool*†	10 0 0	14	13 13
40000	National†	30 0 0	73	71 73
37500	New South Wales†	20 0 0	42	41 43
12500	Ottoman Company*†	2 0 0	2	1 2
40000	Union of Australia*†	25 0 0	47	47 49
80000	Union of London†	15 0 0	45	46 48

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
1200	Alderley Edge, c, Cheshire*	10 0 0	—		
3000	Bedford Unit., c, Tavistk.*	2 6 8	—		
3200	Bedol Aur, l, Holywell	1 0 0	—		Jan. 1866
500	Billins, l, Flint	30 0 0	—		Fully pd.
1000	Blaendyffryn, s-l*	2 0 0	—		Mar. 1866
6000	Bolingey Hill Consols, c	0 5 0	—		July, 1865
1248	Boscaswell, t, c, St. Just	6 15 0	—		
240	Boscean, t, St. Just	20 10 0	—		
5000	Bottle Hill, t, Plympton	1 14 6	—		June, 1866
1600	Brixham Hematite Iron*	6 7 6	—		
200	Brynford Hall, l, Flint	28 0 0	—		Jan. 1866
5000	Bryn Gwiog, l, Flint	9 0 0	—		June, 1864
30000	Caldbeck Fells, l, Cumber.*	1 0 0	—	1¼ 1⅜	Mar. 1866
1000	Camborne Consols, c	18 10 0	—		Feb. 1864
4600	Camborne Vn. & Wh. Fran.	11 2 10	1¾	1⅜ 1⅝	Mar. 1866
8000	Cape Cornwall, c, St. Just*	2 5 0	—		Jan. 1866
2000	Caradon & Phœnix Cons.*	0 12 0	—		April, 1865
914	Caradon Cons., c, St. Cleer	30 3 6	—		Nov. 1865
1000	Carn Brea, c, t, Illogan	21 0 0	—		
6000	Carn Camborne, c, Cambn.	1 19 0	1¼		April, 1866
4005	Cardigan Cons.* [1000 £5 pd., 3005 £4 5s. pd.]				April, 1866
600	Cardiganshire, l*	10 0 0	—		Mar. 1866
20000	Carysfort [3200 £2½ pd., 16800 £1⅜ pd.]				Mar. 1865
6400	Cashwell, l, Cumberland*	2 10 0	2	1½ 2	Jan. 1865
66000	Castell Carn Dochan, g*	0 8 6	—		
2500	Cefn Cilcen, l, Flint*	2 15 0	—		April, 1866
2500	Central Minera, l*	3 7 6	—		April, 1866
16000	Central Snailbeach l	1 0 0	—		Fully pd.
3000	Chiverton, l, Perranzabu..	8 7 6	6¼	6¼ 6¾	May, 1866
3000	Chiverton Moor, l, Perranz.	4 16 0	5½	5⅜ 5⅝	May, 1866
4000	Clara Unit., l, Ponterwyd*	2 10 0	—		July, 1865
3000	Clowance Wood, c*	5 0 0	—		Fully pd.
16000	Coolartra & Bond* [5300 £1 pd., 10700 16s. pd.]				Feb. 1865
256	Condurrow, c, t, Camborne	76 10 0	—		
5000	Connorree, c, sul, Wicklow*	1 0 0	—		Fully pd.
6500	Cornish Clay and Tin*	1 0 0	—		Fully pd.
2450	Cook's Kitchen, c, Illogan.	19 8 9	2	2 2½	
1024	Copper Hill, c, Redruth	12 10 0	—		June, 1866
861	Crane, c, Camborne	31 4 6	—		Mar. 1866
3000	Crenver & Wh. Abraham*	4 0 0	—		Mar. 1866
12000	Crelake, c, Tavistock	3 1 0	—		Aug. 1865
2500	Crowan Consols, c, Crowan	5 11 0	—		Dec. 1865
1428	Crowlwm, l, Llanidloes	1 13 0	—		Dec. 1864
6000	Cuddra, c, t, St. Austell	4 18 6	—		June, 1866
35000	Dale, l, North Stafford	1 0 0	⅜		Fully pd.
1000	Darren, l, Cardigan*	9 4 0	—		April, 1866
4076	Devon and Cornwall, c	6 6 3	—		
5000	Devon Great Maria*	7 0 0	—		May, 1866
1024	Devon Wheal Lopes, c*	12 0 0	—		Dec. 1865
12800	Drake Walls, t, c, Calstock.	2 1 0	—		
656	Ding Dong, t, Gulval	48 14 6	—		Sept. 1865
20000	Dolfrwynog, g*	0 15 0	—		June, 1864
3000	Dyfngwm, l, Wales	12 6 0	—		
1000	Eaglebrook, l*	17 19 0	—		Feb. 1865
512	East Basset, c, Redruth†	29 10 0	13	10 12	
1000	East Basset and Grylls, t	3 5 0	—		July, 1865
6000	E. Bottle Hill, t, Plympton	0 6 6	⅜	⅜ ½	Oct. 1865
2000	East Buller, c, Gwennap	2 0 0	—		Mar. 1865
2000	East Chiverton, l, Perranz.	2 8 6	2¼		May, 1866
2048	E. Falmouth, s-l, Kenwyn.	5 0 6	—		April, 1864
6000	E. Grenville, c, Camborne	3 1 0	2¾	2⅝ 2⅞	May, 1866
4000	E. Gunnislake & S. Bed. c.	8 16 6	¾		May, 1866
6145	East Jane, s-l, Cardinham.	2 17 6	—		April, 1865
6000	East Laxey, l, Isle of Man*	2 10 0	—		Dec. 1865
3986	E. Providence, t, Uny Lel.	4 15 3	—		May, 1866
5000	E. Tresavean, c, Gwennap.	0 10 0	—		May, 1865
6000	East Snaefell, l, I. of Man*	2 0 0	2		Dec. 1864
5610	East Seton, c, Camborne	0 11 0	—		Oct. 1865
6000	East St. Just, t*	3 0 0	—		Jan. 1866
256	East Tolgus, c, Redruth	96 0 0	—		April, 1866
1190	E. Wh. Agar, c, St. Cleer.	12 17 0	—		Jan. 1865
2048	East Wheal Grylls, t, c	3 2 6	—		Oct. 1865
4000	E. Wh. Russell, Tavistock†	11 6 0	—		April, 1866
15000	Ellen Unit., c, z, St. Agnes*	1 0 0	—		Nov. 1866
6144	Esther Und., t, Cardinham	0 6 3	—		July, 1865
6000	Fortescue Consols	0 12 6	—		
940	Fowey Con., c, Tywardreath	5 1 6	—		June, 1866
6000	Furze Hill Wood Con. Buckl.	1 16 0	—		Feb. 1866
10000	Fursdon, c* [5000 £1 10s.]	—	—		Mar. 1865
1026	Garden, t, Morvah	5 12 9	—	1½	Mar. 1866
4096	Garlidna Unit., t, Wendron	5 7 7	—		Feb. 1866
4000	Gawton, c, Tavistock	3 5 6	—		Feb. 1866
6000	Gen. Min. Co. for Ireland, c	4 0 0	—		
5000	Glan Alun, l, Mold*	1 0 0	—		Fully pd.
30000	Glasgow Caradon Cons., c*	1 0 0	—		Fully pd.
6000	Godolphin Hill, Breage*	1 3 0	—		Dec. 1865
2000	Golch Hill, l, Flintshire	1 13 5	—		Sept. 1865
6144	Gonamena, c, St. Cleer	5 4 0	—		April, 1866
6000	Gothic, s-l, Cardigan*	2 10 0	3⅛		Fully pd.
486	Grambler and St. Aubyn†	68 0 0	—		Mar. 1865
4096	Great Caradon, c, St. Ives.	3 6 0	⅜	¼ ⅜	April, 1866
10000	Great Devon and Bedford.	2 10 0	—		Mar. 1866
3000	Gt. East Lovell, t, Helston	1 15 0	—		May, 1866
5000	Great Mona, l, Isle of Man*	2 10 0	—		Jan. 1866
5000	Great North Downs, c	5 8 0	—		June, 1866
40000	Gt. Northern of Ireland*	0 10 0	—		
12500	Gt. No. Laxey (Isle of Man)*	0 10 0	2	1¾ 2	Feb. 1865
6000	Great Retallack, s-l, b	1 17 0	—		April, 1866
6000	Great South Chiverton, s-l.	1 7 6	—		April, 1866
6000	Gt. So. Tolgus, c, Redruth.	0 14 6	—		
3000	Great West Chiverton, l	1 0 0	—		June, 1864
3313	Great Wheal Baddern, t	7 17 6	—		June, 1863
6000	Gt. Wh. Busy, c, t, Kenwyn	16 19 6	—		July, 1866
1798	Gt. Wh. Fortune, t, Breage	26 2 0	1½		June, 1866
10000	Great Wh. Metal, Breage*.	2 0 0	—		May, 1865
119	Great Work, t, Germoe	100 0 0	—		
2500	Grit and Stapeley, l*	10 0 0	—		July, 1864
10240	Gunnislake (Clitters'), c	4 3 0	—		
6068	Gwydyr Pk. Con., Llanrwst	1 11 6	—		Feb. 1866
6000	Hallenbeagle, c, Kenwyn	2 2 6	—		April, 1866
6400	Harwood, l, Durham*	0 6 0	—		Sept. 1864
5000	Havan, l, Cardigan*	4 15 0	—		Mar. 1866
7219	Hawkmoor, t, c, Calstock	3 11 6	—		Jan. 1866
5000	Hendre, l, Flint*	4 0 0	—		April, 1865
6000	Illogan, t, c	0 19 6	—		June, 1866
6000	Lady Bertha, c, Tavistock†	3 16 0	½	¼ ⅜	April, 1866
3000	Leawood, c, l, Lydford	3 3 6	—		June, 1866
1019	Leeds and St. Aubyn, t, c	19 13 4	—		Mar. 1866
963	Lelant Cons. t, Uny Lelant	35 0 0	—		Mar. 1863
160	Levant, c, t, St. Just	10 8 1	—		June, 1866
2000	Long Rake, l, Flint	6 15 0	—		Jan. 1866
2000	Lower Park, l, Denbigh*	3 11 0	—		Jan. 1864
3000	Maes-y-Safn, l*	20 0 0	—		
6000	Maudlin, c, Lostwithiel	4 7 0	—		May, 1865
5000	Merllyn, l, Flint	3 15 6	—		Jan. 1866
3000	Minera Western Boundry*	0 2 6	—		Sept. 1863
4975	Molland, c, South Molton	3 13 0	—		Aug. 1865
640	Mount Pleasant, l, Mold	4 0 0	—		
1024	Nangiles, t, c, Kea	25 0 0	12½		May, 1866
4000	Nanteos, l, Cardigan*	1 0 0	—		Fully pd.
512	Nant Minera, l*	6 10 0	—		Jan. 1865
250	Nanty Mines, l, Montgom.	20 0 0	—		
6000	New Clifford, c, Gwennap*	2 0 0	2¼	2 2¼	Mar. 1866
24000	New Cornish [12000 £1 pd., 12000 12s. pd.]				Dec. 1864
6400	N. Crow Hill, l, St. Stephen	3 0 0	—		Feb. 1866
6000	New East Birch Tor, t	1 2 6	—		June, 1865
6514	New E. Russell, c, Tavistk.	0 9 6	—		Nov. 1865
6400	Nether Hearth, l, Dufton	1 1 0	—		May, 1865
400	New Hendra, t, c, Breage	14 11 0	—		Mar. 1866
6400	New Pembroke, t, c	0 17 6	—		Mar. 1866
5755	New Treleigh, c, Redruth	4 8 0	—		May, 1866
960	New Trevenen, t, Wendron	8 14 0	—		May, 1866
470	Newtonards Min. Co. Down	50 0 0	—		
4096	New Wheal Lovell, t	1 5 0	—		May, 1866
15000	New Wheal Martha, c*	1 0 0	—		Fully pd.
400	New Wh. Seton, c, Cambn.	51 15 0	32	25 30	May, 1866
6000	North Chiverton, l	2 6 0	—		June, 1866
6000	North Devon, s-l*	0 14 0	—		Jan. 1866
5000	No. Dolcoath, c, Camborne.	3 17 6	—		April, 1866
6000	North Downs, c, Redruth	4 6 4	—		April, 1866
1361	No. Grambler, c, Redruth	6 9 5	—		June, 1866
16000	N. Hallenbeagle [8000 £1 pd., 8000 8s. 6d. pd.]				July, 1865
6000	North Jane, t, s-l, Kenwyn.	2 18 6	¾		May, 1866
6000	North Kit Hill, t, c*	1 0 0	—		
2000	North Levant, t, c, St Just	10 3 0	—		Sept. 1865
20000	Nth. Minera, l, Wrexham*	1 0 0	—		Fully pd.
4000	N. Phœnix, c, Linkinghorne	4 4 0	—		May, 1864
6400	North Pool, c, Illogan	4 8 6	—		June, 1866
700	No. Roskear, c, Camborne.	44 5 0	4	3 4	May, 1866
2000	No. Shepherds, l, Newlyn	6 0 0	—		July, 1866
5936	No. Treskerby, c, St. Agnes	1 9 0	2⅜	2⅛ 2⅜	
6000	North Wheal Basset, c, t†	5 0 0	—		April, 1866
5610	North Wheal Crofty, c†	3 2 10	—		Mar. 1866
6144	N. Wh. Robert, Smp. Spiney	4 6 5	—		Feb. 1866
12288	Okel Tor, c, Calstock	2 3 10	—		Oct. 1865
8000	Old Gunnislake, c, Calstock	1 12 6	—		May, 1866
5000	Orsedd, l, Flintshire	0 0 8	—		
6400	Par Consols, c, St. Blazey†	1 17 0	—		Mar. 1866
6000	Par and St. Blazey Cons. t, c	1 16 0	—		Nov. 1866
8465	Pedn-an-drea, t, Redruth	5 4 6	—		May, 1866
5000	Pendeen Consols, c, St. Just	5 7 0	—		May, 1866
4000	Penhale Wheal Vor, t, c	2 0 0	—		April, 1866
5000	Penhalls, t, St. Agnes	3 0 0	—		May, 1866
15000	Penhale and Lomax, s-l	1 5 0	—	1¼ 1⅜	May, 1866
512	Penhallow Moor, s-l	9 10 0	—		Sept. 1865
6000	Penralt, s-l, Merioneth*	2 7 0	—		Feb. 1865
200	Pentre Lygan, l*	22 10 0	—		May, 1855
1772	Polberro, t, St. Agnes	15 0 0	—		
512	Polbreen, t, St. Agnes	8 0 0	—		
10000	Prince Arthur Consols, l*	2 0 0	—		Fully pd.
12800	Prince of Wales, t, Calstock	0 9 0	—	17s. 19s.	May, 1866
6000	Prosper Un., t, c, St. Hilary	8 14 0	—		July, 1866
12000	Redmoor, c, t, Callington	1 9 6	4s.	⅛ ¼	Feb. 1866
6000	Roaring Water*	2 0 0	—		Oct. 1864
6000	Reinnie Laxey, l, I. of Man*	4 0 0	—		Feb. 1865
5000	Rhafna, l, Carnarvon*	0 11 0	—		Dec. 1864
2000	Rosecliff and Tolcarne*	5 0 0	—		
3973	Rosewarne Consols, c	5 2 6	—		Feb. 1866
6000	Rosewall Hill and Ransom	3 8 6	—		
3848	Rosewarne United, c, t	3 16 11	¾		Jan. 1865
558	Roskearnowth, c, Camb.	3 15 0	—		Mar. 1866
20500	Snaefell, l, Isle of Man*	1 0 0	—		Fully pd.
4096	Sithney Wheal Metal, t	4 2 6	—		Mar. 1866
12000	Sortridge Cons., c, Tavist.†	1 9 6	—		Dec. 1865
6000	S. Alfred Cons., c, Phillack	1 0 0	—		June, 1865
512	South Basset, c, Gwennap.	22 0 8	—		Feb. 1866
100	South Bryn Gwiog, l	7 0 0	—		July, 1865
1024	South Callington, s-l	5 7 6	—	1 1½	Dec. 1865
6000	South Carn Brea, c, Illogan	8 10 6	—		Jan. 1866
6138	So. Condurrow, t, c, Camb.	3 11 0	1¼	¾ 1¼	May, 1866
2283	South Crenver, c, Crowan	12 9 0	—		Oct. 1865
6000	S. Dolcoath & Carnarth. Con.	2 14 6	—		April, 1865
5000	So. Exmouth, l, Christow	2 17 0	—		Feb. 1866
5000	So. Foxdale, l, I. of Man*	3 10 0	—		Mar. 1865
1024	So. Herodsfoot, l, Liskeard	9 10 0	—		April, 1866
2000	South Lovell, t, Wendron	2 10 0	—		Mar. 1866
4000	South Minera, l, Wrexham*	5 0 0	—		Dec. 1865
96	South Pant-y-Gof, l	27 0 0	—		May, 1864
30210	South of Scotland*	0 15 0	—		Feb. 1866
937	So. Wh. Crofty, c, Illogan.	24 10 10	14	12 14	Feb. 1865
496	So. Wh. Frances, c, Illog.†	18 18 9	20	18 20	
6000	South Wheal Grenville, t, c	0 15 6	—		June, 1866
400	So. Wh. Seton, Camborne	70 13 0	—		April, 1866
512	South Tolgus, c, Redruth	9 10 0	⅜	¼	
3000	South Trevenna, t, c*	2 0 0	—		Dec. 1865
794	Spearne Cons., t, St. Just	6 19 6	—		June, 1866
280	Spearne Moor, t, St. Just	5 2 0	—		May, 1866
4000	St. Day Unit., t, Redruth	14 10 0	—		May, 1866
940	St. Ives Consols, t, St. Ives.	9 15 0	5½	5 6	
760	St. Ives Wheal Allen, t	17 12 0	—		May, 1866
8000	St. Just United, t*	2 10 0	—		Fully pd.
9000	St. Just Cons. t [6000 £1 pd., 3000 5s. pd.]				Oct. 1864
7000	Stiperstones, l, Salop*	4 0 0	—		May, 1866
920	Stray Park, c, t, Camborne†	38 18 0	2¾		April, 1866
5000	Swincombe Vale, t*	0 12 6	—		May, 1865
3500	Tin Hill, t, St. Austell	1 8 0	—		Jan. 1866
6000	Tolcarne, c, Camborne	2 14 0	—		Nov. 1865
6000	Tolvadden, c, Marazion	1 10 0	—		Jan. 1866
572	Trelyon Consols, t, St. Ives.	15 10 0	—		
1007	Trencrom, t, Uny Lelant	13 16 8	—		April, 1866
501	Tresavean and Trethurrup	15 10 0	—		Nov. 1865
4440	Trevenen & Tremenheere	7 11 0	—		June, 1865
4096	Treweatha, s-l, Menheniot.	6 17 0	1½	1 1½	Jan. 1866
1943	Treworlis, t, Wendron	9 2 10	—		Jan. 1866
6400	Troedyrhiw, l*	0 4 6	—		Mar. 1866
1000	Trumpet Cons., t, Helston.	11 10 0	—		
6400	Tyne Head, t, c*	0 17 0	—		Sept. 1864
20000	Vale of Towy, l, Carmarth.	0 17 6	—		Aug. 1865
4200	Vigra and Clogau, c, Dolg.*	5 0 0	—		Fully pd.
1028	Wendron Con, t, Wendron	25 3 10	—		May, 1866
60000	Welsh Gold, Dolgelly*	1 0 0	—		Fully pd.
20000	West Beam, t*	1 0 0	—		Fully pd.
1024	West Caradon, c†	13 0 0	—		April, 1866
40000	West Clogau, g, Merioneth.	1 0 0	—		Fully pd.
1000	West Cwm Erfin, l*	5 0 0	—		Nov. 1865
1218	W. Condurrow, t, c, Cam.	12 5 6	—		May, 1866
256	West Damsel, c, Gwennap.	38 10 0	—		
12000	W. Maria & Fortescue, Lam.	3 0 0	—		Feb. 1866
1000	West Nanty, l*	10 0 0	—		Jan. 1866
1000	West Rose Down, c, Linkin.	16 0 0	—		April, 1866
256	West Sharp Tor, c, Rillaton	185 0 0	—		Mar. 1865
1056	West Stray Park, c, Camb.	11 2 6	—		June, 1865
512	West Tolgus, c, Redruth	49 0 0	—		Mar. 1866
512	W. Wh. Frances, c, Illogan	103 5 0	—		May, 1866
5000	W. Wh. Kitty, t, St. Agnes.	2 12 6	—	¾ 1	Nov. 1865
10000	W. Wh. Martha, c, s, Stoke.*	1 5 6	—		July, 1864
1360	W. Wh. Prosper, t, Lanivet	5 18 0	—		Oct. 1863
4096	W. Wheal Vor, t, Helston.	1 15 0	—		Mar. 1866
8000	Wharfedale Mining Co.*	0 5 0	—	—	
6000	Wheal Agar, c, Illogan	6 3 0	—		Nov. 1865
1000	Wheal Basset and Grylls, t	7 0 0	—		
512	Wheal Buller, Redruth†	19 10 0	12	10 12	May, 1866
1000	Wheal Curtis, c, Crowan	15 18 4	—		May, 1866
6000	Wheal Crebor, c, Tavistock	2 2 0	13s.	10s. 12s.	May, 1866
6144	Wh. Damsel, c, t, Gwennap	2 15 0	—		July, 1863
4096	Wh. Edward, c, Calstock	9 1 6	—		Dec. 1865
849	Wheal Emily Henrietta, c.	15 10 0	—		April, 1866
4000	Wh. Emma, c, Buckfastlei.	3 19 0	—		July, 1865
6000	Wheal Grenville, c, Camb.†	9 3 6	1¾	1¾ 2¼	June, 1866
1024	Wh. Grylls, t, Perranuthn.	9 11 0	—		April, 1866
4860	Wheal Hartley, c, Gwinear	2 10 1	—		May, 1866
6000	Wheal Ida, s-l, St. Ive	0 18 0	—		May, 1866
1024	Wh. Kitty, t, Uny Lelant†	3 10 6	½		
512	Wheal Jane, s-l, Kea	8 10 0	—		
896	Wh. Margaret, t, Uny Lel.	13 17 6	—		
728	Wheal Margery, t, c	22 14 10	—		June, 1866
100	Wheal Mary, t, Lelant	36 2 6	—		
6000	Wheal Mary Florence, c*	1 10 0	—		May, 1866
1000	Wh. Mary Hutchins, Plymp.	1 2 6	—		Sept. 1865
6000	Wh. Norris, t, c, St. Cleer	4 6 1	—		Sept. 1865
80	Wheal Owles, t, St. Just	70 0 0	—		
1024	Wh. Par, t, St. Blazey	8 8 0	—		Jan. 1866
1024	Wheal Polmear, c	7 13 9	—		Aug. 1865
240	Wh. Reeth, t, Uny Lelant.	116 10 0	—		Mar. 1866
1500	Wheal Sarah, t, Lanivet	0 13 8	—		June, 1864
6000	Wheal Sparnon, c, Redruth	1 18 0	—		May, 1866
1920	Wh. Trannack, c, Sithney.	1 12 3	—		April, 1865
1200	Wheal Trevenna, t, c*	7 0 0	—		Mar. 1866
4096	Wheal Uny, t, c, Redruth	10 10 0	⅜		June, 1866
4450	Wheal Vlow, t, Perranzab.	1 7 0	—		Feb. 1865
6000	Wheal Union, c, Redruth	5 1 11	—		June, 1866

MISCELLANEOUS.

Shares.	Companies.	Paid.	Last Pr.	Bus. done.	Last Call.
60000	Anglo-American Telegr.*†	10 0 0	10	9 10	
20000	Anglo-Mexican Mint†	10 0 0	16½	15 17	
20000	Atlantic Telegraph*†	5 0 0	3¾	3½ 3¾	
20000	Australian Agricultural†	20 10 0	18	16 19	
25000	Bolckow, Vaughan*†	17 10 0	23½	21½ 23½	
6000	British American Land†	44 0 0	27	22 27	
5348	Brit. & Irish Mag. Teleg.*†	100 0 0	85	78 83	
27000	China Stm.-ship & Lab. Coal†	9 0 0	—		
20000	City London Real Prop.*†	5 0 0	3	2¼ 3¼	
20000	City Offices*†	12 10 0	3	1½ 2½	
50000	Commercial Uni. (Insu.)†	5 0 0	5½	5¾ 6¼	
20000	Consolidated Discount*†	12 10 0	2	1½ 3½	
42000	Copper Miners of Eng.† [2000 £25 pd., 40000 £100 pd.]				
10000	Cred. Fonc. of Mauritius*†	10 0 0	8	5 7	
20000	E. Indian Land, Credit*†	10 0 0	4	2 4	
80000	Ebbw Vale Iron Co.*†	20 0 0	11	10 12	
100000	Egyptian Com. & Tradg.*†	9 0 0	2¼	3½	
879975	Electric Telegraph †	100 0 0	132	130 135	
20000	English and For. Credit*†	7 10 0	1¼	2 3	
10000	Eng. & Scottish Marine*†	5 0 0	3	2 3	
25000	Fairbairn Engineering*†	5 0 0	4¾	5 5¼	
30000	Fore-street Warehouse*†	10 0 0	11¼	10¾ 11¼	
5000	Freehold Ld. & Brickm.*	4 0 0	—		May, 1866
10000	Gellivara*†	20 0 0	—		
20000	General Stm. Navigation†	14 0 0	28	26 28	
4000	Hollybush Col. and Coke*	5 0 0	—		May, 1866
20000	Home and Colon. Assur.*†	5 0 0	2¼	2 2⅛	
100000	Hudson's Bay†	20 0 0	16⅞	16¾ 17	
20000	Humber Ironworks*†	20 0 0	—		
80000	Im. Land Co. Mersailles*†	7 10 0	—	½ 1⅛	
100000	Imperial Mercan. Credit*†	7 10 0	—	1 2	
80000	Joint-Stock Discount*†	10 0 0	—		
20000	London and Caledonian*†	5 0 0	4	2 4	
12000	London Dist. Telegraph*†	5 0 0	1½	1 1⅛	
148525	London Gen. Omnibus *†	4 0 0	3¾	3½ 3¾	
5000	London and Glas. Engl.*†	15 0 0	9	6 8	
64500	London & Prov. Marine*†	2 0 0	2½	1¼ 2	
40000	Millwall Ironworks*†	5 0 0	—	1⅞	
15000	Royal Mail Steam*†	60 0 0	102	100 103	

b, blende; *cl*, coal; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl.*, slate; *s-l*, silver-lead; *t*, tin; *z*, zinc.

. Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange.

. Our object being to make the Share List correct, we earnestly call upon those who have the power to aid us, by forwarding any alterations or correction which may, from time to time, come under their notice. To shareholders, as well as those officially connected with the mines, we appeal for information. Reports from mines—in fact, mining intelligence of every description, forwarded to our office, will meet with ready attention.

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